

THE  
ARCHITECT  
& BUILDING NEWS

*In this issue*

NURSERY SCHOOL IN VIENNA

3-STOREY FLATS AT ADEYFIELD

EMPIRE WAREHOUSE, VICTORIA DOCKS

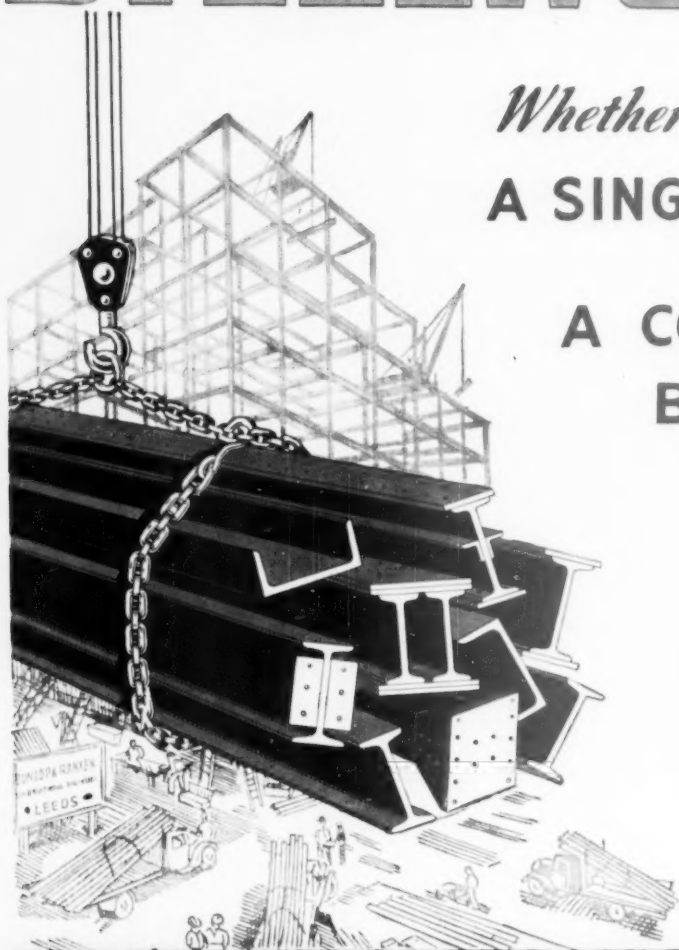
NOVEMBER 24, 1950

VOL 198

NO 4275

ONE SHILLING WEEKLY

# STEELWORK



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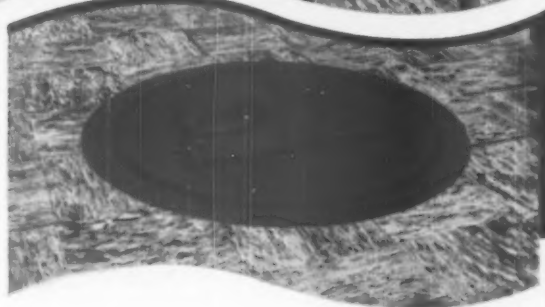


## FUNCTIONAL *Beauty*

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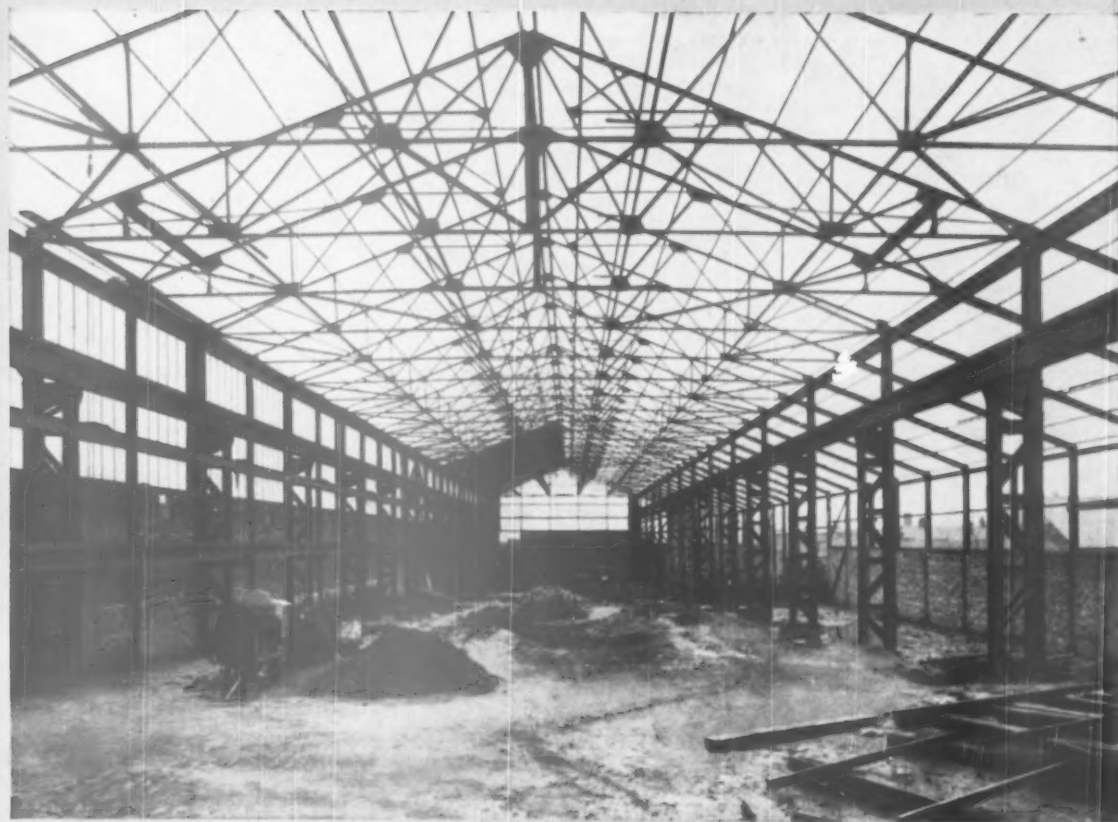
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*Only the best would do for  
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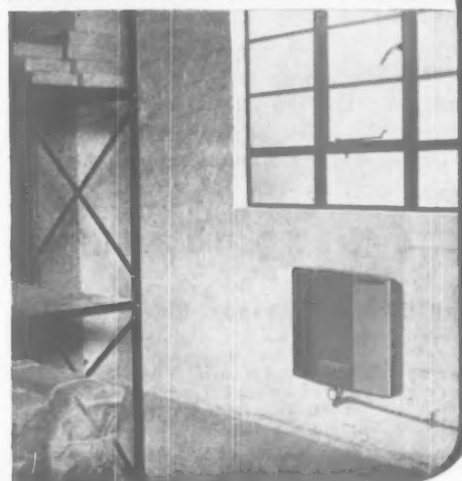
*Bank of England*

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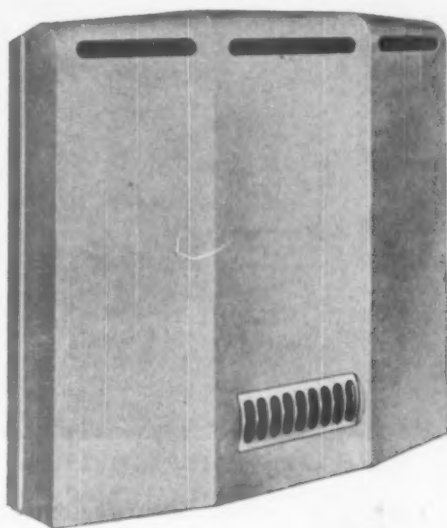
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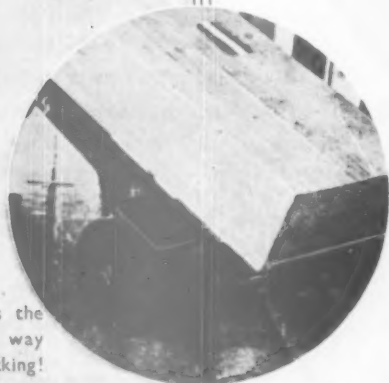
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Chief Engineer, The Railway executive (Western Region)

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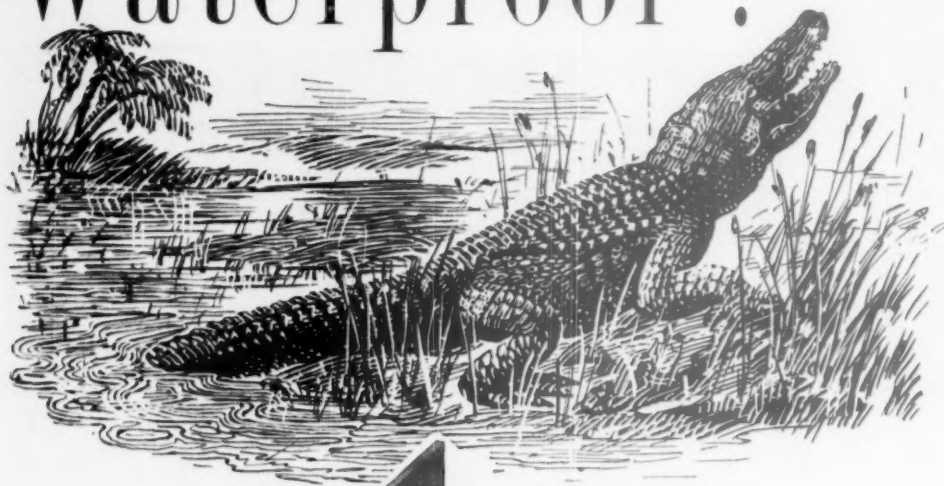


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## SUNDEALA

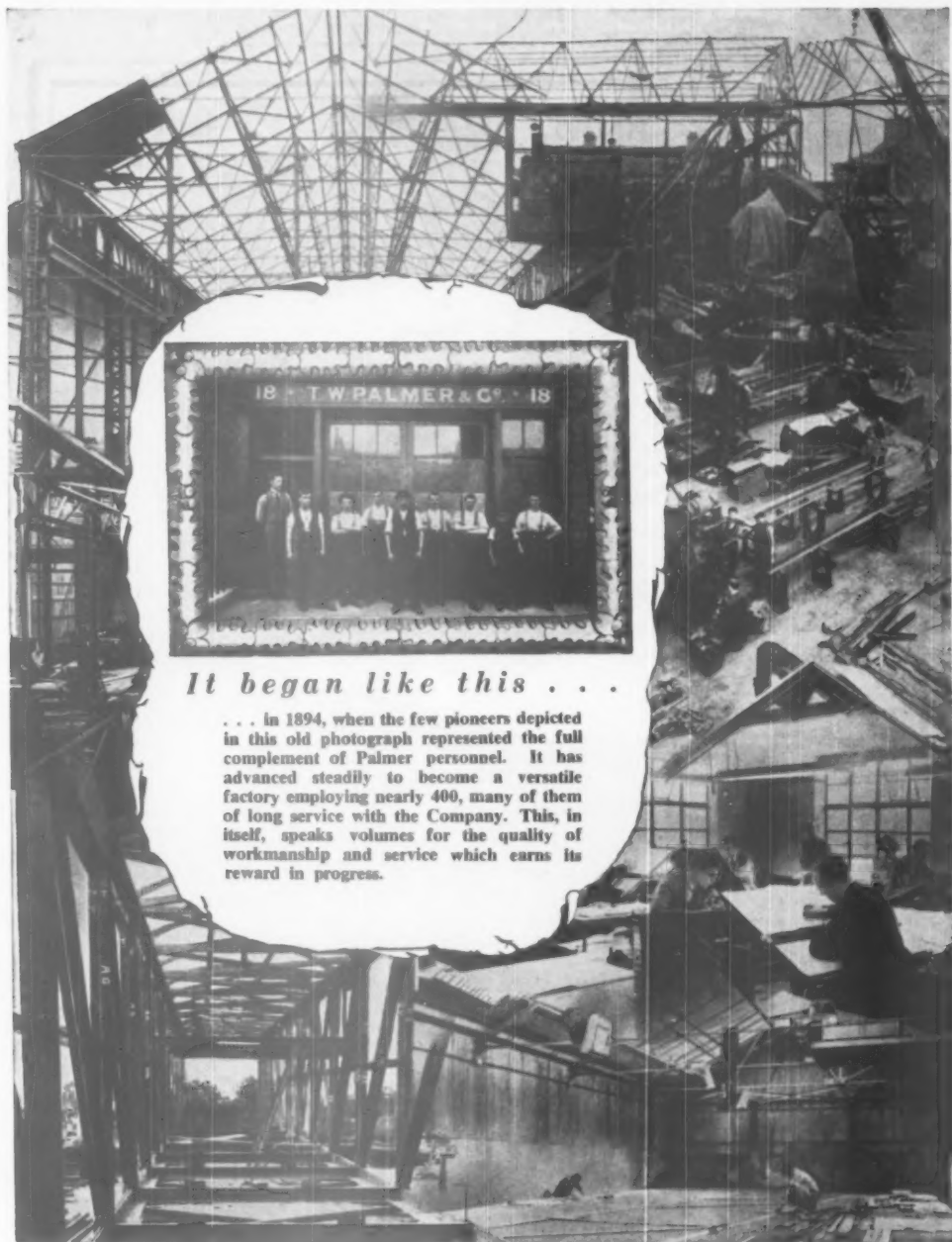
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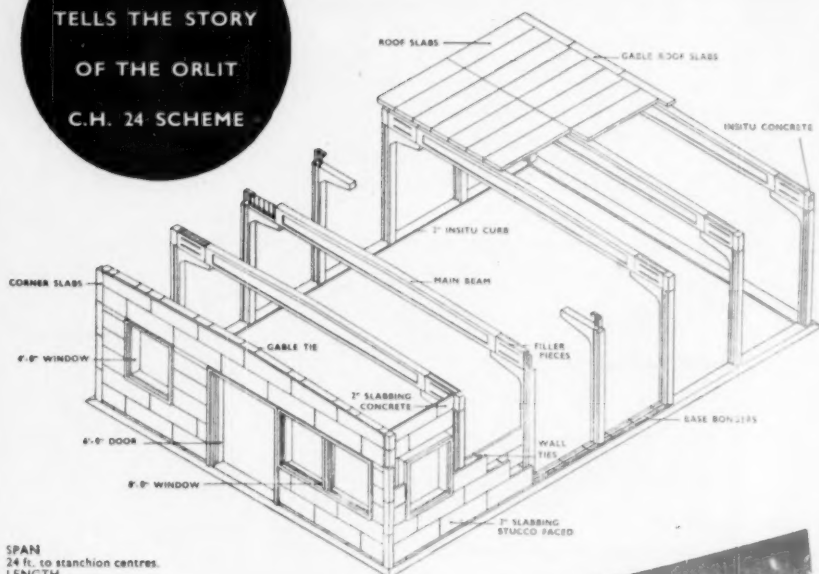
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OF THE ORLIT  
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9' 10½" to underside of roof slabs.  
**WINDOWS**  
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4' 0" x 1' 8", 4' 0" x 3' 3½", 4' 0" x 4' 10½"  
**DOORS**  
Openings 2' 6", 3' 6", 4' 10½", 5' 3" in width.  
**END WALLS**  
May be left open for shop fittings, garages, etc. External wall facing in rough stone finish.

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Architect:

Cyril J. Greening, A.R.I.B.A., A.M.T.P.I.

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—yet not quite the whole story. The C.H. 24 Scheme, suitable for single storey buildings, is explained above in its structural details, but it must be emphasised that OrLit is a *method* which is capable of great flexibility. OrLit gives the economic advantages of pre-cast construction, yet allows architects full scope to exercise their faculties of design.

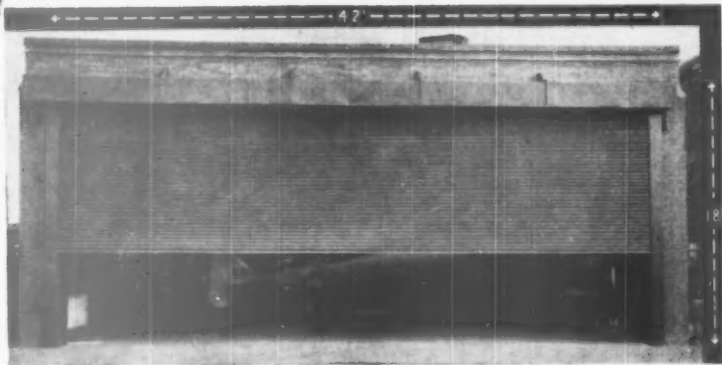
Apply to any of the firms listed on left for full details.

*Like Britain***CANADA CHOOSES BRADY**

Land of unusual attainments, Canada also has unusual requirements, but when the Canadian Car & Foundry Company of Montreal wanted a giant 'rolling door' far beyond the usual specification, it was not beyond Brady. Ordered on January 28th, 1949, it was despatched on July 12th, 1949, and in operation on August 5th, 1949; proof that the Brady organisation can tackle out-of-the-ordinary rolling shutter problems as efficiently as the standard installations which have won 'Brady Roller Shutters' an international grading.



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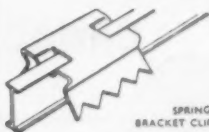
# SPECIFY 'Rufflette' CURTAIN SUSPENSION SYSTEMS

BRAND

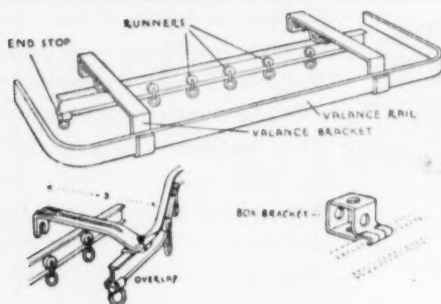
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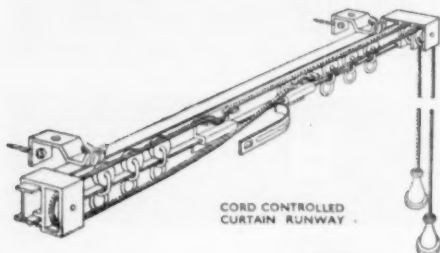
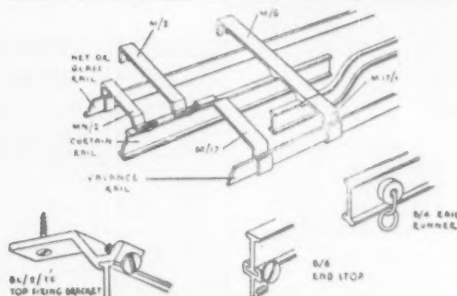
STEEL CHANNEL  
STRIP FOR PLASTERED  
CONCRETE.SHOWING STEEL CHANNEL  
STRIP IN POSITION IN  
PLASTERED CONCRETE LINTEL.

## 'Rufflette' brand B/L CURTAIN RUNWAY

This runway has been specially designed for wood frame windows. The construction is of heavy extruded brass, with top or face fixing brackets made specially for quick fitting and is therefore a valuable time-saving device. For strength, durability and easy running specify 'Rufflette' brand B/L Curtain Runway.

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CORD CONTROLLED  
CURTAIN RUNWAY

## 'Rufflette' brand CORD CONTROLLED CURTAIN RUNWAY

For smooth and trouble-free operation the 'Rufflette' brand Cord Controlled Curtain Runway is recommended for use in large establishments such as hotels, residences and offices where curtains receive constant usage. It is of simple construction and quickly fitted without dismantling. 'Rufflette' brand Cord Controlled Curtain Runway will fit all straight windows.

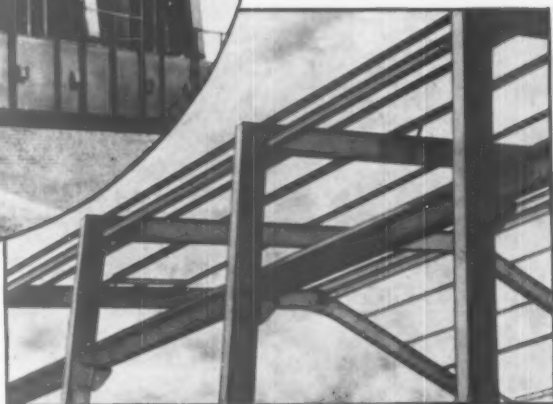
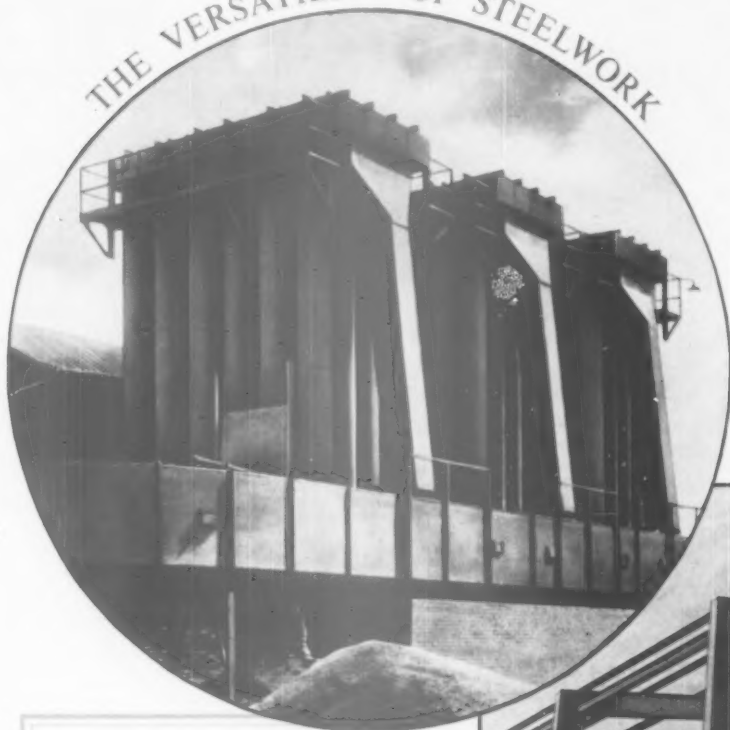
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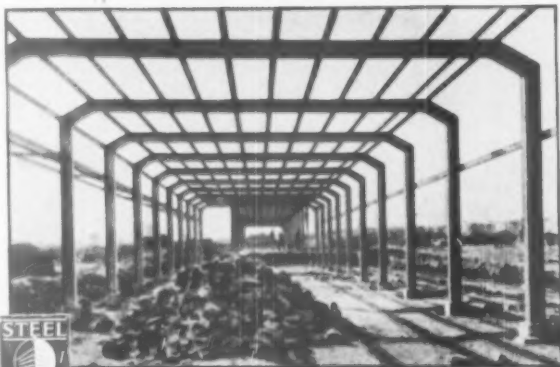
## THE VERSATILITY OF STEELWORK



### Welding and riveting

These steel gas-cooler towers embody both riveted and welded construction, each method being used to advantage in the appropriate situation.

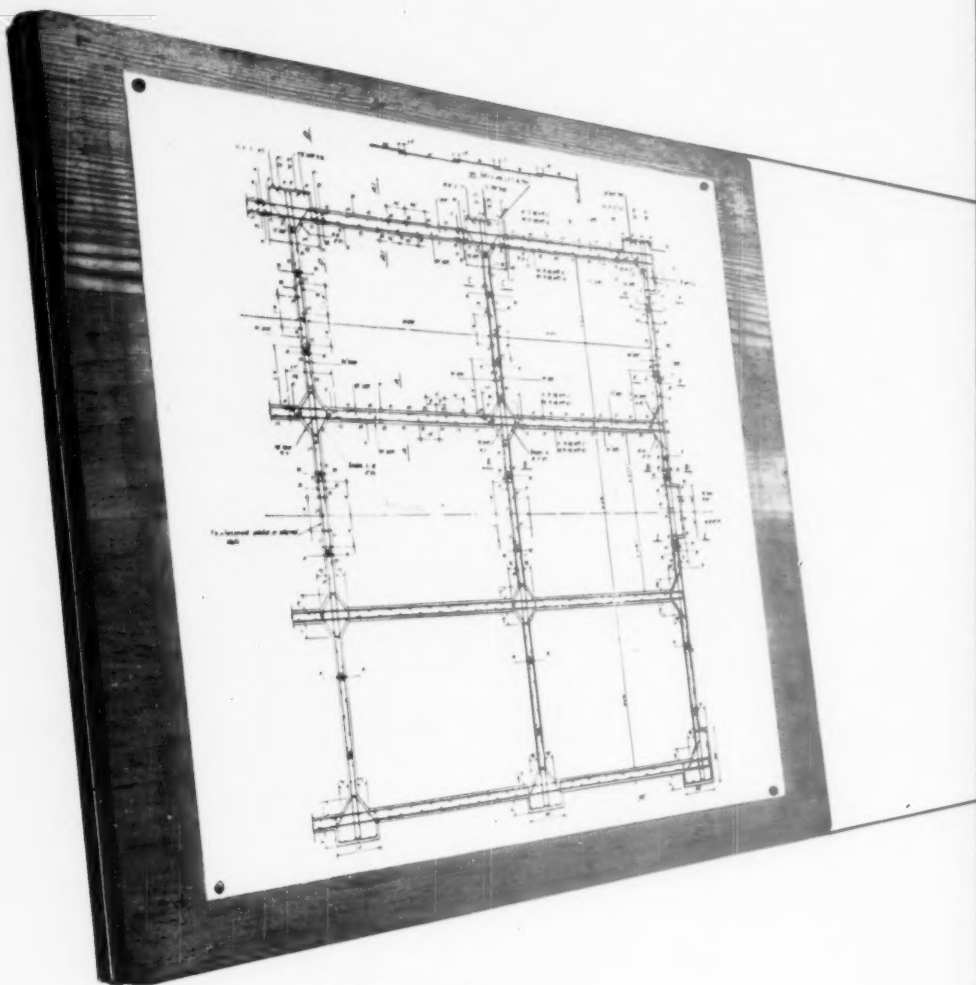
The other illustrations show two examples of welded steel portal-frame construction; in the upper one the frames—at 14' 4" centres with 52' 0" span—carry the crane track and leave unobstructed soffit to the roof. The lower one shows the modern trend in steelwork for schools.



BRITISH CONSTRUCTIONAL  
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ARTILLERY HOUSE, WESTMINSTER, S.W.1.

**B.C.S.A.**



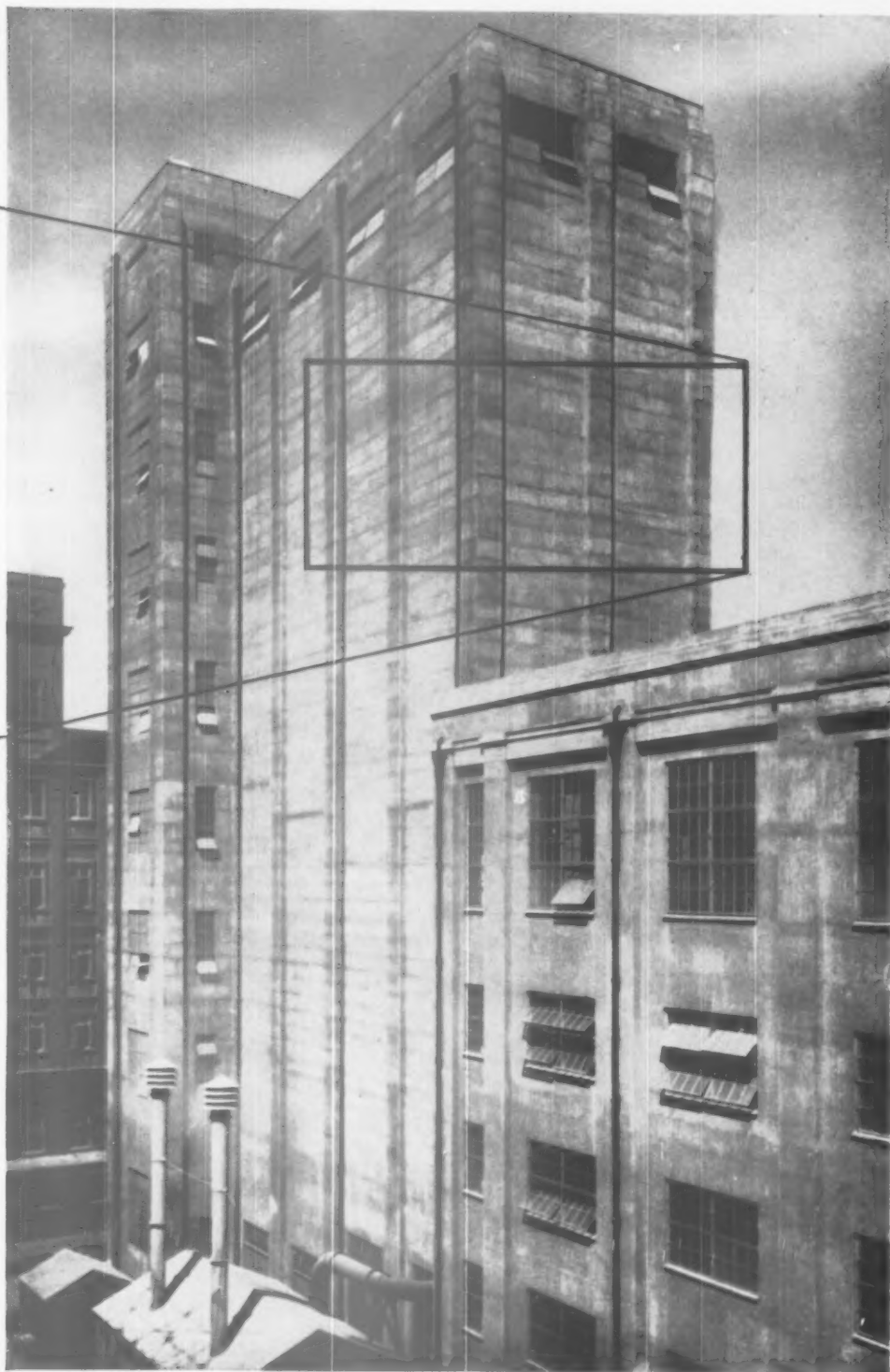


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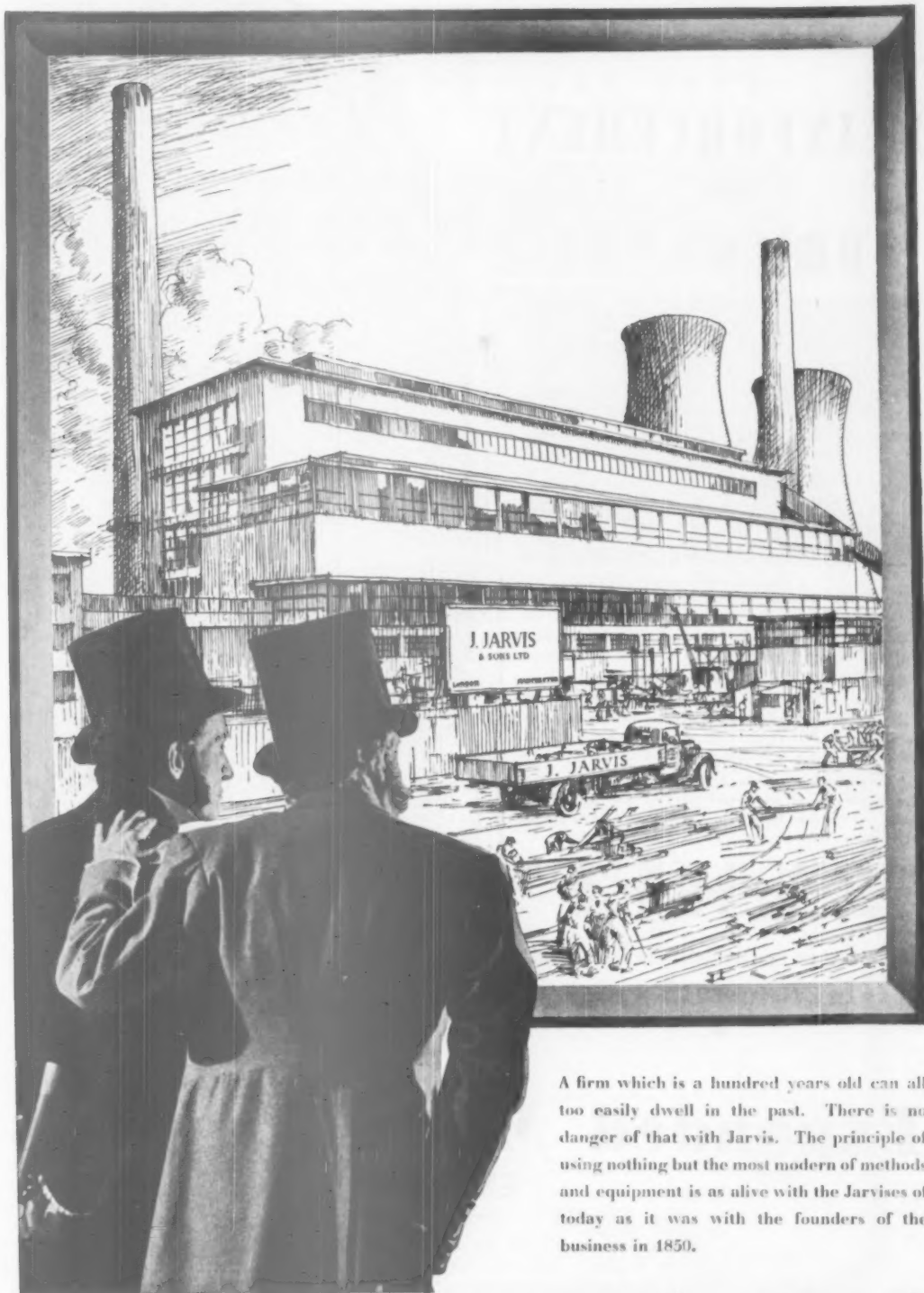
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EXHIBITING AT PUBLIC WORKS & MUNICIPAL CONGRESS & EXHIBITION, STAND 220 (GALLERY) GRAND HALL, OLYMPIA, NOV. 13-18

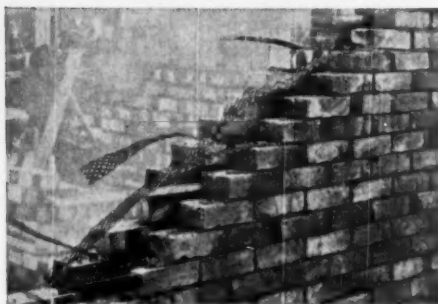


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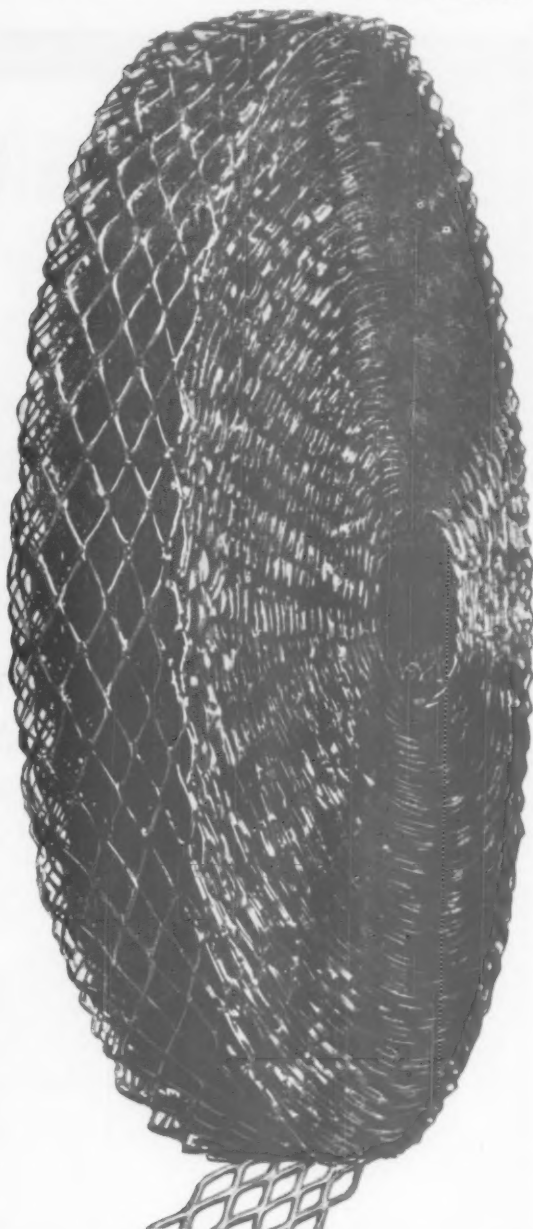
"Exmet" is embedded in the normal thickness of a brick-work joint and because of the mechanical bond of the diamond-shaped meshes it develops its ultimate strength without slipping.

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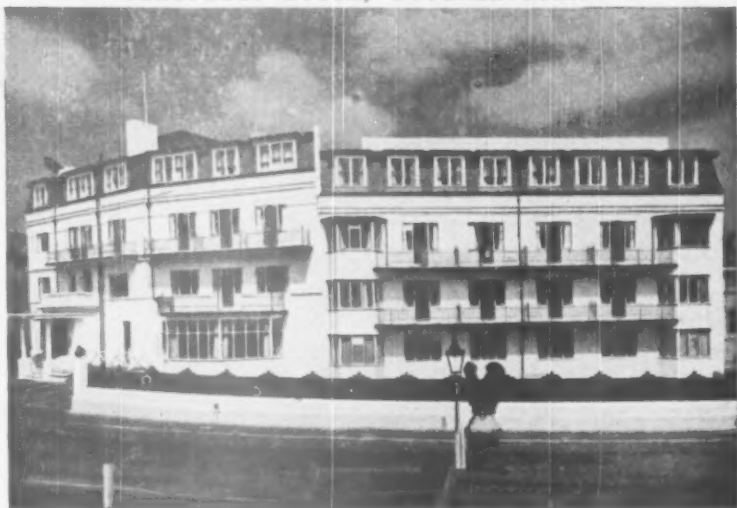
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## THE SNOWCEM CASE BOOK

CHATFIELD HOTEL, BOURNEMOUTH.



Photograph reproduced by permission of the Chatfield Hotel, Bournemouth

The application of Snowcem and Cemprover No. 1 has considerably improved the appearance of this Bournemouth hotel.

The smooth surface of Sand/Cement rendering was originally distempered, which was removed as far as possible before priming with a coat of Cemprover No. 1. Two coats of Cream Snowcem mixed with Cemprover No. 1 were then applied by brush.

Architects: Messrs. Jackson & Greenen, F.R.I.B.A., A.M.T.P.I.,  
Bournemouth.

Contractors: Messrs. Hayward & Sons Ltd., Bournemouth.

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## STONEHOUSE HOTEL, SHEFFIELD

The photograph of the Gentlemen's Smoke Room represents an excellent example of Gaskell & Chambers' latest development. The cabinet work is in Figured Mahogany-Dalex (Regd.) Counter Top, inlaid Terra Cotta Mahogany margins, Miroc (Regd.) non-stain finish with attractively designed diffused lighting.



By courtesy of Duncan Gilmaur & Co., Ltd.  
Architect: J. Foster, L.R.I.B.A.

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THE  
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& BUILDING NEWS

November 24, 1950.

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## HOW MANY HOUSES ?

**W**HETHER it is feasible to build another 100,000 houses a year is a question for factual examination; it is, too, a matter for technical collaboration between experts, between economic planners and physical planners, Government planners and private planners. Any answer worth anything at all must be a balanced resultant of many technical factors.

It is difficult, on the other hand, to conceive that the present demand and debate is not related to politics rather than to technology; in a question of this sort politics and technology are liable to be bad fellow-travellers and they cannot continue long on a single route without strain appearing. Any technical matter can be utterly befogged when subjected to the bias of political expediency. Housing is in danger of being subjected to this process.

It is very clear to all honest citizens that housing must be increased as fast as it is possible to do so; but the question of whether it should take priority over all other matters of expansion or reconstruction is where political bias or technical knowledge and experience come in and one or the other takes the lead.

The facts of the case seem fairly obvious; they are summed up by saying that, having regard to the amount of materials at present available, there is an approximate balance between the demands of housing, health, industry, education and rearmament which enables all these activities to progress together without any one robbing and stultifying another to any great extent. If one of the demands becomes imperatively greater than the others, as might well happen under

a threat of an inevitable war, then housing and perhaps some other activities would be reduced to non-production at a stroke of the pen. If, *all things being equal* in the building industry, housing is to be increased by 50 per cent, then building of other things will have to be curtailed correspondingly. This naturally applies equally to materials and components, and the size of the whole problem will be readily appreciated by reference to the table of quantities which is produced on the next page.

The words "all things being equal" have special significance in housing and the building industry at the present moment. Because it is being proposed that certain altered conditions shall be introduced to assist the production of more houses. On the assumptions that we cannot spare more men, adequately trained, to do the job, that we are already getting all the home-produced and imported materials that we can make or pay for, and that the parallel demands of other industries, education and the rest must remain the same, it is very evident that it is one of two things which will give us more houses: (a) the reduction of standards—less rooms or smaller houses—or (b) the rate of building (and here we include pre-building negotiations, etc.) must be substantially increased.

Let us examine these alternative issues more carefully. To reduce standards is a course likely to react politically to the disadvantage of those responsible; moreover it would be a retrograde step physically and, morally, it would be an admission of error and defeat.

If mere size of houses is to be reduced, then the effect will not be great either in cost or in numbers built. It is the parts of a house, its components and fittings, its foundations and services and site works that contribute most to its cost and are more or less standardised requirements; reduction of "air-cube" does not make much difference—except to amenity.

To increase the speed of house-building is much more feasible. Though it must be remembered this involves only labour and site-organisation questions; it is also a matter of increased supply of materials. Higher speeds of construction may mean another 100,000 houses a year if only there can be corresponding increases in the supply of materials and the manufacture of components and the speed of their distribution—which, we have seen, cannot be accomplished unless other things suffer. But, even so, this particular emphasis does point an issue which can well affect housing. All the industry knows that building takes longer than before the war. Why? Are the individual units less well organised? Are the operatives less fast or less inclined to work? Are the incentives for either masters or men insufficient? Are construction methods out of date? To answer these questions—and they must be asked—implies deep probing into matters of national planning and economics; we have not space to go very far in the exploration; but—who will? Is the industry doing so?

There are more people employed in the building and civic engineering industries than at any time since before 1939 (the first war-year); even allowing for the increase in housing standards and for certain other post-war factors, the rate of house-building does not approach the average rate, reckoned in those days, of "one man—one house—one year." It seems, therefore, that there is a lack of co-ordination or willingness in the industry to tackle the question of increased productivity and it is only by increased efficiency in organization that costs can be reduced. If such improvements are effected and the quantities of available materials remain the same, then we shall have done something; for, if there can be no more houses in a year, then we may release some man-power for other and, perhaps, equally important work.

But it must be a whole-hearted pulling together by all sections of the industry and by all citizens of good-will that will effect even a partial solution; this cannot be done by taking political sides, with all the bitterness and blindness that may result; the matter is largely a technical one with intimate inter-relationships with the equally technical problems of power, transport and foreign exchange. Ballyhoo of any sort, by whom indulged, is not enough.

It must not be forgotten, also, that much competent work on these questions of reorganization for

QUANTITIES OF BUILDING MATERIALS  
REQUIRED FOR CONSTRUCTION OF  
TYPICAL HOUSE OF 1,000 SQUARE FEET  
COSTING APPROXIMATELY £1,500

	ONE HOUSE	100,000 HOUSES
Ballast	14 yds. cube	1,400,000 yds. cube
Concreting sand	8 yds. cube	800,000 yds. cube
Building sand	18-20 yds. cube	1,900,000 yds. cube
Cement	9-10 tons	950,000 tons
Lime	2 tons	200,000 tons
Common bricks	15,000-16,000	1,550 million
Facing bricks	5,000	500 million
Partition slabs	50-60 yds. sup.	5,500,000 yds. sup.
Roofing tiles	4,500	450 million
Roofing felt	90 yds. sup.	9,000,000 yds. sup.
Timber: Softwood	1.6 standards	160,000 standards
Hardwood	5 ft. cube	500,000 ft. cube
Plaster board	110 yds. sup.	11,000,000 yds. sup.
Plaster	1 ton	100,000 tons
Steel rod reinforcement	1-2 cwt.	7,500 tons
Sheet lead: Roof	2 cwt.	10,000 tons
Gutter in cavity wall	2-3 cwt.	12,500 tons
Eaves gutter	75 ft. run	7,500,000 ft. run
Rainwater pipe (cast iron or asbestos)	35 ft. run	3,500,000 ft. run
Plumbing pipes: ½ in. dia.	80 ft. run	8,000,000 ft. run
1 in. dia.	65 ft. run	6,500,000 ft. run
1½ in. dia.	55 ft. run	5,500,000 ft. run
2 in. dia.	6 ft. run	600,000 ft. run
2 in. Iron waste pipe	10 ft. run	1,000,000 ft. run
3½ in. Iron soil pipe	23 ft. run	2,300,000 ft. run
Sanitary fittings: Sink	1	100,000
Basin	1	100,000
W.C. Suite	2	200,000
Bath	1	100,000
60 Gallon cold water tank	1	100,000
25-30 Gallon hot water cylinder	1	100,000
Boiler	1	100,000
Glass	150 ft. sup.	15,000,000 ft. sup.
Putty	½ cwt.	75,000 cwt.
Distemper	1½-2 cwt.	175,000 cwt.
Paint	6-8 gallons	700,000 gallons
Drain pipes (excluding main sewers):		
Soil	80 ft. run	8,000,000 ft. run
Rainwater	70 ft. run	7,000,000 ft. run

In addition there would be the following items, normally supplied or carried out by Specialist Firms:

Pitchmastic and other solid pavings to the whole of the Ground Floor.  
Tile fireplaces or electric panel fires. Electric light and power installation.

increased production has been done already; the Simon Committee on Distribution of Building Materials (1948), the Girdwood Committee on Costs (1948-50), the Productivity Team's Report (1950), the Working Party's Report (1950), P.E.P. on the Economics of the Council House (1950), and "Housing Policy and the Building Industry" just published, and many other documented inquiries contain many of the basic as well as the detailed facts—if not all the answers. So much human effort surely cannot be left to encumber pigeon-holes even at the demand of either politics or profit. This is everyone's concern and should be kept on that plane, the while remembering that the building industry and even political parties are also composed of citizens, that the houses are for other citizens and are wanted urgently for human welfare and industrial efficiency.

## EVENTS AND COMMENTS

### THE ARCHITECTS' BENEVOLENT SOCIETY

**A**S this is the Centenary year of the A.B.S. you will, I am sure, forgive a further reference to it. The P.R.I.B.A. has launched an appeal for £50,000 to build and endow some houses for old people. You may already be a regular subscriber to the Society's funds but even so I hope you will feel that the President's appeal deserves a special donation. It is a severe reflection on the profession that out of sixteen thousand registered architects only one thousand and twenty-two are annual subscribers to the Society. If this does not prick your conscience I think perhaps it should.

If you had intended to go to the Centenary Ball at the Dorchester and have not already bought your tickets you are now too late for they are all sold.

### ANGLO-SWEDISH STEAMER

**O**F the eleven ships built for the Swedish Lloyd line since 1879, to carry pilgrim architects, and others, to Sweden, seven have been of British construction. The latest one was launched a week or so ago at Newcastle. She is the "Patricia" and is the largest so far with a passenger capacity of four hundred and eight. Most of her first class accommodation will be furnished by A.B. Nordiska Kompaniet of Stockholm but the smoke room and the "de luxe" suites will be furnished by Maple & Co. of London. The third class accommodation will be carried out by the builders. The result of this international effort will be awaited with interest tempered with anxiety.

### CHRISTMAS IN THE SHOPS

**F**ATHER Christmas has arrived in most of the big London stores where toys are sold and decorations on the snow and robin principle are beginning to appear even in the smallest shops. Someone stole my three fattening ducks last night; there are only x shopping days to Christmas, and so on. Selfridges as usual has a lavish display of flashing Christmas trees and reindeer. Hamleys is like the worst sort of traffic jam from early morning and I imagine that the crowds are besieging that fascinating shop in New Oxford Street where they sell coloured paper. The best idea I have so far seen is in the Regent Street branch of Richard Shops—the original Katz and Vaughan design—where a team of reindeer pulling a sledge are seen rocketing along quite undismayed by the plate glass window through which they pass, fairy lights and all, the leading two pairs of beasts turning across the facade of the building. Liberty's windows are usually full of ideas but they have a tendency to buy a dozen of everything which I find a little overpowering. The present scheme includes life-sized ladies performing remarkable feats of levitation while gracefully appearing to imitate Venus in the formation of the milky way.

### ANTI-COLONIAL OFFICE

**L**ORD HALIFAX'S appeal for the old site of the Westminster Hospital to be left vacant has been on the whole well supported in *The Times*. So far there has only been one letter opposing the idea and this largely on the grounds that the appeal has been launched rather late in the day. The writer, Mr. E. H. Keeling, described Hawksmoor's western towers as



Mr. L. Crainford, Managing Director of the Festival of Britain Gardens in Battersea Park taking Mr. Herbert Morrison over the Pagoda, the first of a line of shops.

"incongruous" and referred slightly to the improved view of the Central Hall. He further counter-claimed for additional clearance in Abingdon Street. I dimly remember a controversy about the demolition of Georgian houses for a site for the George V memorial, and surely the remaining houses are worth preserving? Mr. Keeling's argument seems to me to have no bearing on the present appeal except in so far as it may contribute eventually to the fulfilment of the *Architectural Review* plan for the Westminster precinct which a great many people still hope to see in their lifetime. The suggestion that the Westminster Hospital site should be used for the erection of a commonwealth war memorial should, to my mind, be resisted strongly. Our national shrines in the Abbey and Whitehall are surely adequate; to multiply them would be to detract from the importance of all.

I would like to see Lord Halifax supported by the Presidents of influential bodies including the R.I.B.A. and the A.A.

### L.C.C. HOUSING NEW STYLE

**F**IRST scheme out of the bag since Robert Matthew, Architect to the Council, and Whitfield Lewis and his Gang started work, is for parts of Putney



#### READERS' HOLIDAY PHOTOGRAPHS

Tram Control Tower, Amsterdam, sent in by D. A. Vincent.

Heath and Wimbledon Common. Schemes for three sites in this large development area have already been approved. The present project deals with three more sites. As the photograph of the model shows, the sites have been developed with different types of buildings from hundred foot high "point houses" each containing thirty-two flats to blocks of terrace houses. This is necessarily a preliminary view and the whole scheme will undoubtedly be given the prominence which it deserves later on in the A. & B.N. It looks distinctly promising. On, Whitfield, on!

Sending my small daughter for all the morning papers I found I had wasted my money for except in *The Times*, which always takes such things seriously,

and the *Daily Telegraph*, which had a minute photograph, I could find no mention of any kind.

#### NATIONAL SMOKE ABATEMENT SOCIETY

THIS Society and indeed the country has suffered a serious loss in the death of Mr. Charles Gandy, Chairman of the Executive since 1934. The development of the Society owes much to his untiring work and it was he who first thought of the idea of smokeless zones; an idea which has since been incorporated in a number of local Acts of Parliament.

#### ROYAL COLLEGE OF ARK

THE ARK, Journal of the R.C.A., has just made its bow. As one might expect, it is a most soigne production. Articles on book illustration are interleaved with examples of students' work mainly from the Graphic Design School. The advertisements are firmly controlled. I liked very much a picture of a Roman Emperor with the inscription "animADVERT-ant omnes ARTifices opera COLMANI PRENTIS ET VARLEII" (for the non-classical scholar "Colman Prentis and Varley the advertising agents").

The next number of this excellently produced paper will appear in February 1951 and will be devoted to Domestic Art. A later issue will deal with Architecture and related subjects.

#### WINDOW DRESSING STUDENTS AGAIN

YOU may remember the Regent Street window dressing competition in which students from schools of art took part. The idea has been carried a stage further by E. K. Cole Ltd., the electrical manufacturers, who recently organised a competition among their dealers. If they so wished the dealers could have the co-operation of art school students when dressing their windows. The first three prizes were won by firms who took advantage of this offer. History does not relate how many firms had student help; perhaps they all did.

Wells Coates, Robin Day and E. K. Cole were the judges.

#### JOSEPH PAXTON AND HIS BUILDINGS

ON November 13, 1850 Joseph Paxton laid his plans for the Crystal Palace before the Royal Society of Arts. On November 15, 1950 his granddaughter Violet Markham addressed the Royal Society of Arts on "Joseph Paxton and his Buildings." Miss Markham described Paxton's long association with the Duke of Devonshire, his lily house and other great works at Chatsworth based on the study of ferro-vitreous construction. I have not read Miss Markham's book, "Paxton and the Bachelor Duke," published in 1935 by Hodder & Stoughton, and the story of the "Great Victorian Way" was new to me as it may be to you. It was Paxton's solution to the London traffic problem and consisted of a glass covered boulevard encircling London by way of the Royal Exchange, Rotherhithe, Lambeth, Westminster, Victoria, Belgravia, Kensington, Notting Hill, Paddington, Islington and back to the Royal Exchange. Eight railway lines were to run side by side in a raised corridor and the boulevard was to be 72 feet wide and one hundred feet high. The estimated cost was £34 million. The scheme went quite a long way and the Queen and the Prince Consort became very interested in it. Though we may perhaps be thankful that the Great Victorian Way was never built it is a tragedy that not one of the elaborate drawings prepared for submission to the House of Commons Committee has survived.

ABNER

# NEWS OF THE WEEK

## Norwich Arts Centre

The Assembly House, Norwich, was opened by the Lord Lieutenant of Norfolk, Sir Edmund Bacon, Bt., on November 23. Before the 18th century Assembly Rooms designed by the Norwich master-builder and architect Thomas Ivory were erected, there had been buildings on the site since the latter half of the 13th century, traces of which remain to this day.

The Assembly Rooms after various vicissitudes and neglect were occupied by the R.E. during the war for use as a camouflage school and this occupation saved the building from severe war damage as it was several times hit by incendiaries.

After the war, the owner, Mr. H. J. Sexton, created a trust to administer the building as an Arts Centre for the people of Norwich and by his generosity made possible the reconstruction for which Mr. S. Rowland Pierce, F.R.I.B.A., was responsible. The architect has revived the splendour of the Georgian wings with scholarship and spirit and has by skilful planning contrived to form a live Arts Centre out of what was a moribund building.

## Buildings of Historic Interest in Ely

The Cathedral of the Holy Trinity, Ely, and three other churches in the city have been listed by the Ministry of Town and Country Planning as buildings of special architectural and historic interest. The churches are the Parish Church of St. Mary, the Church of St. Michael, Chetisham, and the Church of St. Mary, Stuntney.

College buildings listed include Ely Porte, the Barn and Stables to the south, and Guest Quarters of the Monastery and subsidiary buildings, including the Headmaster's House, the Guest Hall and subsidiary buildings, Bishop's House (Prior's House) and residences incorporating the remains of the Infirmary and including the Chapel. The Bishop's Palace, Palace Green, is also included.

Under the provision of the 1947 Act no person may demolish a building which has been listed, nor may any alteration or extension to the building be carried out unless at least two months' notice has been given to the local planning authority.

The award of the Saltire Society for the best designed flats built during the period 1947-49 by a Local Authority in Scotland has been awarded to Glasgow Corporation for their flats on the Pollak Estate in Netherplace Road. These modern flat-roofed blocks contain three and four apartment houses, and are constructed of a light coloured building block. They have balconies painted in light colours, and have a spacious well-kept garden setting on hilly ground, with many of the original trees retained. The flats were designed by Mr. L. C. Scott, L.R.I.B.A., under the then Director of Housing, Dr. R. Bradbury, now in charge of housing in Liverpool.

## Competition Results

The Competition for an Australian World War II Memorial to form an extension to the Shrine of Remembrance at Melbourne, has been won by Mr. Ernest Edward Milston, A.R.A.I.A., of Prague, who settled in Australia in 1938, and served in the Royal Australian Engineers. Twenty-one designs were submitted of which six were from England.

The results of the competition sponsored by the Cement and Concrete Association for the design of Motorways Bridges as announced by the assessors, are as follows: In the opinion of the assessors, designs submitted by Atkins & Partners and Clive Pascall, A.R.I.B.A. (design No. 14), and by Lindsey Drake, A.R.I.B.A., Denys Lasdun, F.R.I.B.A., A. J. Harris, A.M.I.C.E., and W. M. Johns, A.M.I.C.E. (design No. 22), were so equal in merit that they have decided to place them together and divide the first and second prizes between them. Each of these two groups of competitors will therefore receive the sum of £400.

The third prize of £200 is awarded to Louis Erdi, L.R.I.B.A., and A. J. Berkmyer, A.M.I.C.E. (design No. 13).

The F.B.I. Industrial Art Committee's annual prize to students at the Royal College of Art has been awarded to Mr. Frank Guille of Brighton and Mr. Robin Howland of High Wycombe.

The prize, worth a little less than £100, will enable these two students of furniture design to prolong their stay at Copenhagen where they are at present working under Professor Kaare Klint, one of Scandinavia's foremost furniture designers and perhaps the most distinguished teacher of furniture design in the world. The thesis which these two students will write on the practice and teaching methods of Professor Klint is expected to be of great interest to furniture designers in this country.

H.R.H. Princess Elizabeth graciously approved Mr. Guille's design of a bed for Prince Charles. This bed, the christening present from the Royal College of Art to Princess Elizabeth, is now being made in the College workshop.

Mr. J. L. Berbiere, A.R.I.B.A., has been awarded the Unsworth Sketch Design Prize for the third time. This was announced at a recent meeting of the Liverpool Architectural Society.

Birkenhead Corporation has decided to increase the fees of Mr. Herbert J. Rowe, F.R.I.B.A., architect of the Woodchurch Estate, to £16,684—an advance of £2,700. This has followed a request to Mr. Rowe that modifications should be made in the design of the houses on the estate.

## Scholarship for Graduate

*Study in landscape architecture at Harvard University, September 1951.*

The Department of Landscape Architecture, Graduate School of Design, Harvard University, offers to those eligible for admission as regular students a scholarship for the next academic year with an income of six hundred dollars equal to the tuition fee.

Candidates must have received their Bachelor's degree, or equivalent, within the past four years; students who are candidates for the degree in June 1951 are also eligible.

The Scholarship will be awarded on the basis of scholastic standing and evidence of interest in the field of landscape architecture. The Department reserves the right to make no award if such a decision is deemed advisable.

Further information will be furnished on request; all inquiries should be received before January 1, 1951, and should be addressed to the Chairman, Department of Landscape Architecture, Robinson Hall, Harvard University, Cambridge 38, Massachusetts, U.S.A.

## COMING EVENTS

### L.M.B.A.

● November 28, at 2 p.m. Luncheon at 1 p.m. At Cafe Royal, North End, Croydon. Southern Area General Meeting. Speaker: G. H. A. Hughes.

### Housing Centre

● November 28, at 6 p.m. Students' Discussion Meeting.

### R.I.B.A.

● November 28, at 6 p.m. Discussion on the Reports of the Anglo-American Productivity Building Team and Working Party.

### R.S.A.

● November 29, at 2.30 p.m. "Cities Without Noise." Speaker: Right Hon. Lord Horder.

### T. & C.P.A.

● November 29, at 6.15 p.m. "Italy Emerges." Film Show by John Chear.

### M.O.W.

● November 29, at 7.15 p.m. At Mayfield Hall, Pelham Road, Gravesend. "Some Mechanical Aids Developed for Building." Speaker: K. G. H. Fryer.

### A.A.

● November 29, at 8 p.m. "Background to Modern Hospital Architecture." Speakers: Rene Sand and Richard Llewellyn Davies.

### Institution of Structural Engineers

● November 30, at 5.55 p.m. "Cold Formed Sections in Structural Practice with a Proposed Design Specification." Speaker: W. Shearer Smith. Chartered Auctioneers and Estate Agents' Institute

● November 30, at 6 p.m. "The National Trust—its Development and Problems." Speaker: J. F. W. Rathbone.

### On The Air

● November 29, at 7.45 p.m. Home Service. "Watching a Town Grow." Speaker: Honor Balfour.

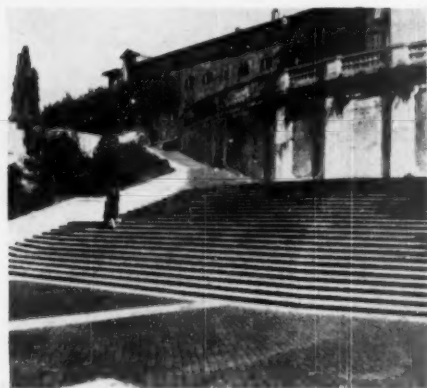




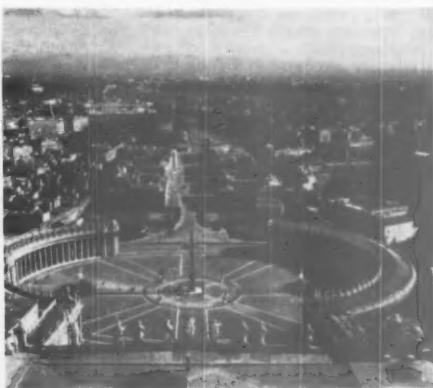
*S. Maria di Montesanto in the Piazza del Popolo, Rome.*



*The Piazza Venezia, Rome, with the Palazzo Venezia on the left.*



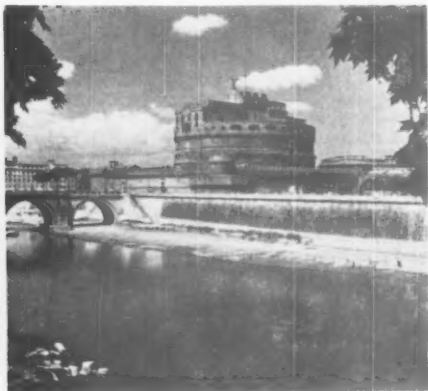
*Spanish Steps, Rome.*



*From the dome of St. Peter's.*



*Entrance to church at the top of the pilgrimage of Parrochia S. Benedetto, Madeloni, nr. Naples.*



*Castel S. Angelo from across the Tiber, Rome.*

Photographs by A. L. ARSCHAVIR

READERS' HOLIDAY PHOTOGRAPHS





*Rooftops of Salzburg.*



*Triumphal Arch, Innsbruck.*



*Market Square, St. Wolfgang.*



*Old City and Höblinghaus, Innsbruck.*



*Classic church, St. Johann.*

**Photographs by Ralph H. Lewis**



*A Bank in Arnhem.*



**Photographs by D. A. VINCENT, B.A., Student R.I.B.A.**

**R E A D E R S ' H O L I D A Y P H O T O G R A P H S**

# IN PARLIAMENT CORRESPONDENCE

## A.B.S. Centenary Appeal

### Old People's Cottages

To the Editor of A. & B.N.

THE House of Commons, with some time to spare after the completion of its set business, returned to the question of housing on November 20.

**Mr. Keenan** (Liverpool, Kirkdale, Lab.), who raised the question, with particular reference to costs, said he did not want any lowering of present standards of house-building, but maintained that costs could be reduced by increasing the density of houses an acre from 14 to 20, and by building terraced houses in preference to semi-detached dwellings, inasmuch as that would reduce road charges and save labour and materials.

**Mr. J. Baker White** (Canterbury, C.) said that slums arose in past years from bad planning and from trying to build too many houses to the acre. It would be a mistake if we fell into the same error again. If there were only small supplies of materials on large housing sites the men would not run the risk of working themselves out of jobs. The way to get houses built quickly was for local authorities and private builders to make sure that there were at all times adequate supplies of materials on the jobs.

**Mr. Tomney** (Hammersmith, North, Lab.) said that productivity in the building industry was not as great as could be wished. In London there was need for more flats, for people were not willing to travel long distances to their work. What was needed was to raise the incentive by giving an adequate reward to the men on the job.

**Sir Richard Acland** (Gravesend, Lab.) emphasised that duplex houses were a practical proposal. Seven such houses would provide 14 accommodation units—the equivalent of eight full-sized council houses. As a result of the international situation the nation was in a different position in regard to the housing programme from that which confronted the Government in May. Until that time it was not unreasonable to suppose that the house-building rate could have increased to 400,000 houses in 1951, and more in 1952. Four years later it might have been possible to solve the housing problem by building full-sized council houses. Any rate of building which was reasonably likely under any Government in the next few years was not likely to shorten the queues for houses very much.

**Mr. Remnant** (Wokingham, C.) asked if it were possible for local authorities to build on a super-footage basis, so that they could be free to meet the requirements of their own localities.

**Mrs. Braddock** (Liverpool, Exchange, Lab.) said that the building industry should come under State control immediately. If she had responsibility she would have taken up the Conservative challenge of 300,000 houses, because everything it was necessary to do to build the extra 100,000 houses would be against the Opposition policy. While so many houses were desperately needed all other type of building should be stopped completely for two or three years, except for the factories needed to maintain full employment.

**Mr. Blenkinsop**, Parliamentary Secretary, Ministry of Health, answering

the debate, said that density rates varied throughout the country, and the Ministry worked on a basis of habitable rooms to an acre. The attention of local authorities had been drawn to the desirability of getting plans nearer the minimum laid down by the Ministry in the "Housing Manual."

He warned members that there was a grave danger in attempting to sell the future for the apparent benefit of the present. No one realised better than he the need of the people who were wanting houses, but they must be careful not to fall into the errors of the past. Local authorities were worried by the vast proportion of the houses built at the turn of the century which were now becoming uninhabitable. The standards now enforced were practical and not idealistic; they were not suddenly created out of the imagination but were the product of careful examination by bodies set up during the war and since.

It shocked him to hear members putting forward suggestions that had been recommended to local authorities for a long time past. The Ministry had been pressing authorities to build more terraced houses and flats on their estates, instead of peppering them with masses of semi-detached houses. Apart from the waste of land and the higher costs involved, they would get no community feeling in the estates unless there were varied types of building. It did not please the Minister or him to see the development of continuous semi-detached buildings on so many local schemes. Sixty-five suggestions for economies inside houses had been sent to local authorities last year and many had been adopted.

It would be a misinformed policy to insist that every local authority, irrespective of need, should concentrate attention on building one- or two-bedroom houses. No one had done more recently than the Ministry of Health in trying to encourage local authorities to build more such houses where that was desirable.

There had been steady growth in the number of small houses built by local authorities in recent months, but the Ministry did not want to press local authorities into going too far.

The Ministry had not adopted some sort of fantastic, idealistic standard which they were imposing throughout the country, but they insisted on certain minimum standards which they believed to be right. Within those standards they wished to encourage the greatest possible flexibility in meeting urgent needs. They appreciated the ease with which pressure could be developed for a reduction of standards which would merely be a slipping down the greasy slope into conditions of the past. He hoped all members stood against that danger.

Subject to making that stand, much could be done with the co-operation of local authorities in trying to tackle the cost of houses at a time when circumstances tended to force up the cost of the materials needed for houses.

(From Our Parliamentary Correspondent)

Sir,—The idea you mention seems a very good one. There are so many old people living miserably and unwanted. For my part, I hate the thought of living alone, as I know I shall have to sometime in the future."

That extract is from one of many letters received from beneficiaries welcoming the proposal made by the Architects' Benevolent Society to mark its hundredth year by building and endowing a scheme of cottages for old people connected with the architectural profession who, for reasons of finance or of health, are not able to fend for themselves.

To raise £50,000—the sum required for building and endowment of the scheme—is a challenge whose magnitude in these days I do not underestimate. Yet it is one which should be well within the compass of our profession, if every office, private and official, will take a hand, and every individual architect and assistant will make himself personally responsible for supporting the appeal to the best of his ability. It should be made clear that this scheme supplements and does not replace the benevolent work carried on for so long by the Society among sick or needy architects and assistants who prefer, and are able to continue in, their own homes.

On November 27, the President of the A.B.S. (Mr. A. Graham Henderson, A.R.S.A., P.R.I.B.A.) is sending a letter asking for support to every architect on the Register. May I supplement this by asking that all heads of offices to whom the scheme commends itself should communicate the details to their staffs and invite one or more members to make themselves responsible for an office collection. In that way, I believe we shall raise the sum required.

Why should we do this? Less, I suggest, because any of us from some unexpected blow of fate could find ourselves in need of friendly help, than because I believe that we have a personal duty to see that the milk of human kindness does not grow chill where the old people of our own profession, and their dependants, are concerned.

"It is a wonderful thought . . . I am proud to have been, if only remotely, associated with such a fine, generous and upstanding profession."

That final extract from the letter already quoted seems to me to be a challenge we should not wish to ignore. Will you, by every means in your power, help the Society to meet it?

I am, etc.,

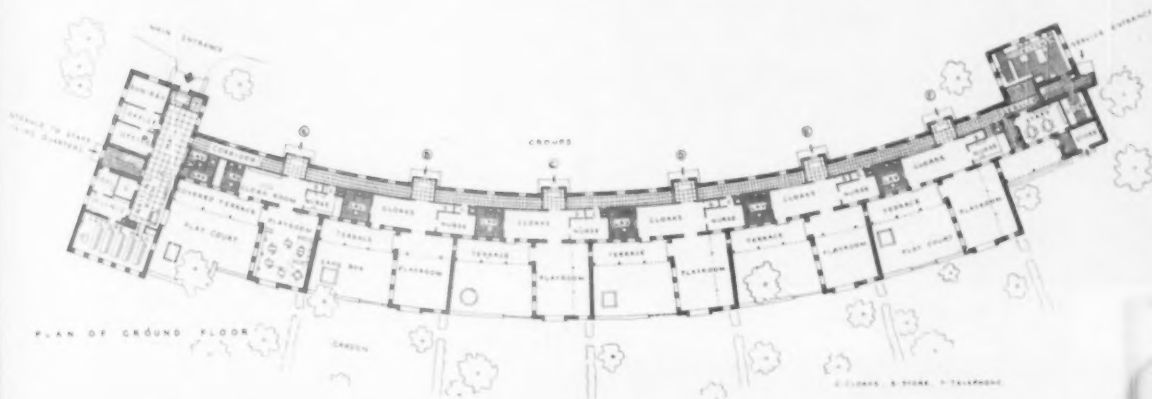
ROBERT O. FOSTER,  
Chairman, Centenary Appeal  
Committee.

\* \* \*

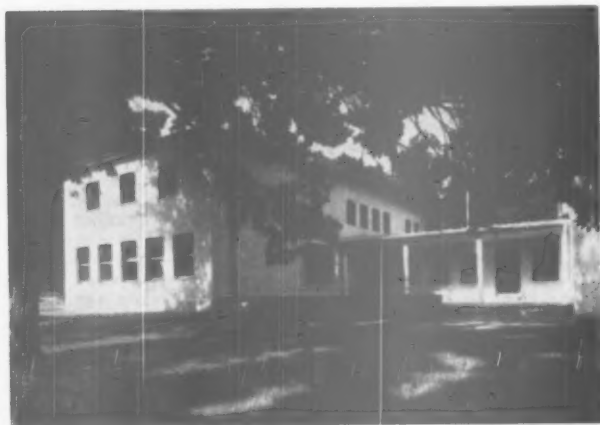
At the R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities held on October 4, 5 and 6 1950, nine candidates presented themselves and the following were successful: Mr. C. C. W. Butler, Mr. Alan Hilton, Mr. R. V. G. Hogston.

# NURSERY SCHOOL "SCHWEIZER SPENDE" IN VIENNA

architect: Professor FRANZ SCHUSTER  
Hon. Corresponding Member, R.I.B.A.



Above: General view. Below:  
The Institute, seen from the garden. Clinics and lecture  
hall on the ground floor, staff accommodation on the  
upper floor.



VIENNA, having in the nineteen-twenties been the founder of the Kindergarten movement, leading architecturally and educationally, found herself faced at the end of the last war with having to find accommodation for the schooling and treatment of a number of young children who had suffered damage, mentally or physically, during air raids and fighting in the city.

This school, completed in 1949, for handicapped children aged between four and eight, is dedicated to the Swiss people who, with their generous aid, saved thousands of Viennese children from starvation. It was built with the co-operation of the Swiss government, who sent all building materials and fittings which were unobtainable in Vienna at that time.

The architect, Prof. Franz Schuster, widely experienced in the design of schools, had to solve a number of problems caused by the unusual nature of this school. A site was chosen in a richly wooded park in the vicinity of the former Imperial Palace of Schonbrunn, which offers seclusion and yet is easily accessible. In addition to the class rooms, kitchen and staff quarters, accommodation had to be provided for treatment rooms and resident and visiting doctors and psychiatrists, with facilities for their training and research. In view of the often severe disablement of the children admitted to the school it was considered desirable that each group should have its own completely self-contained accommodation and separate entrances, a fact which determined the spreading plan.

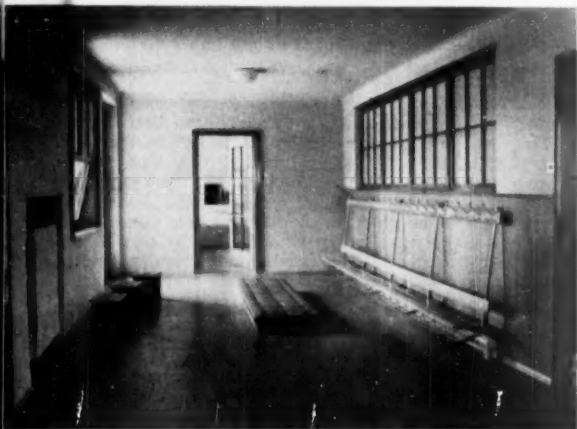
There are six groups in which the children are grouped according to their various disabilities, and a unit for one group of normal children to enable the medical and teaching staff to compare their development with that of the other groups. The classrooms are on a slightly curved axis to ensure the maximum of both sunshine and privacy for each unit, which consists of a playroom, entrance porch, cloakroom,



One of the playrooms



The play court, covered terrace and garden of one of the units



One of the cloakrooms

lavatories, a nurses' room with stores, play court with a covered terrace, and a garden. The units are connected to the kitchen block and the clinic by a narrow corridor, used only by the staff.

Each playroom has a large window facing south, and three low-silled windows to the play yard. In order that the children, over-sensitive as their disablement makes them, should not feel exposed in the "glass box" type of room which is necessary for adequate lighting and ventilation, the ceiling in one part of the room has been lowered considerably. This part, with its tiny window with shutters operated by the children themselves, is most popular with them, because there they feel at home and secure.

The nurses' room has a small window into the playroom through which the medical staff and visitors can observe the children's activities without being seen themselves. Cloakrooms and lavatories are so arranged that the children can attend to their toilets as independently as is possible in each case.

The partly covered paved yard, with its sand and flower boxes, is sheltered from the prevalent west wind. From it can be reached the cloakroom and lavatories by a separate entrance. A few steps lead down to the garden—handrails are deliberately omitted—and hedges ensure the privacy of each group.

The Institute contains the clinic, treatment and isolation rooms, the parents' advice centre, the office and a lecture hall with a capacity of thirty persons. On the first floor, with independent entrances, are the flats of the caretaker and the superintendent, and two rooms with bath for visitors.

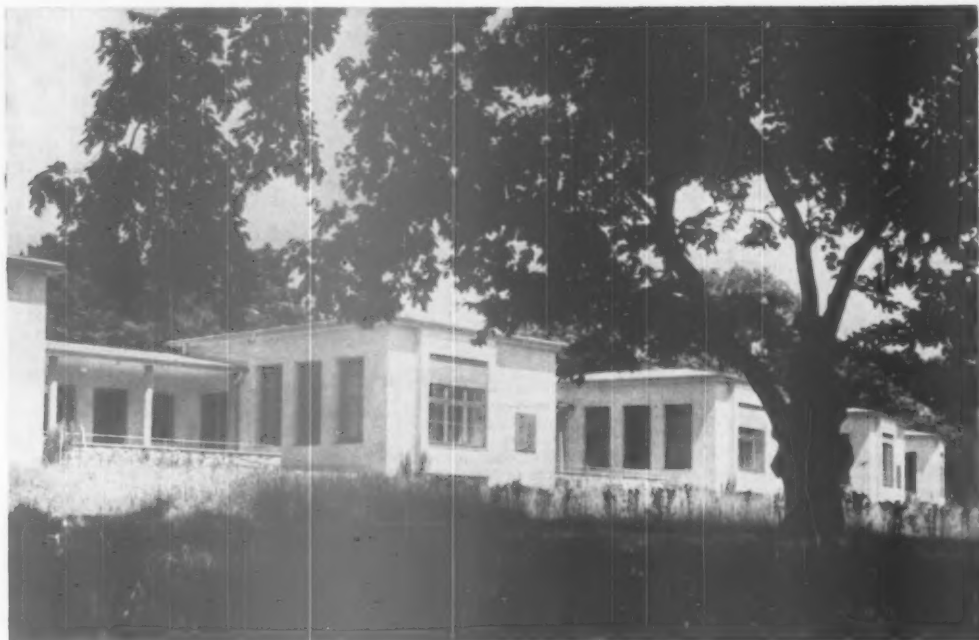
Playroom floors are covered with linoleum or cork tiles and are heated throughout. The furniture is of natural woods and simple form, after a Swiss pattern. Walls are painted in various clear pastel colours. In the unit for near-blind children the ceiling in one part is particularly low, to let the rest of the room appear brighter by contrast, and the furniture and fittings are in very light colours, glossy surfaces and reflections having been avoided. Certain parts of the furnishings in this room are picked out in stronger colours to emphasise natural shadows and outlines. A large bath in the section for crippled children is illuminated, with a transparent front, and serves for therapeutic exercises. All playroom furniture is light enough to be moved about by the children and arranged to their own liking, which they are encouraged to do.

Apart from the special fittings described above, it was decided that the children's surroundings should be as nearly normal as possible, to avoid too great a contrast between the children's day at school and their environment at home and in later life. Aids were only devised to train them to greater independence, and not to emphasise in the child's mind its "apart-ness" from others.

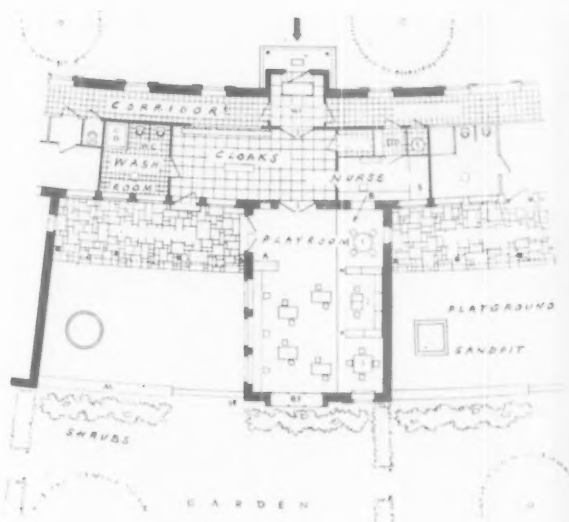
Brick with a cement rendering, was used for all interior walls. The partition walls are constructed of hollow blocks. The low-pitched roof is timber framed and covered with copper sheeting. Interior finish varies slightly in each playroom—some are panelled entirely in wood, others have exposed timber ceilings. All doors and windows on the entrance side are fitted with louvred shutters.

The entire building is centrally heated, all pipes being in a service duct under the corridor.

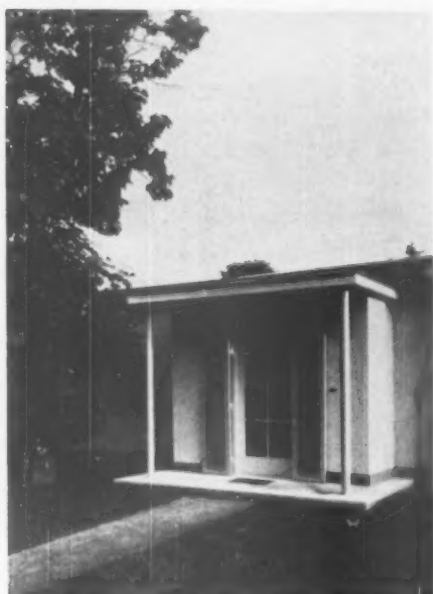
EDITH CAMERON



View of classroom blocks from the garden, shortly after completion.



# NURSERY SCHOOL IN VIENNA



One of the group entrances.

## KEY

- |                   |                      |
|-------------------|----------------------|
| A CONTROL ROOM    | SH PLAYGROUND        |
| B BATH            | SP SUPERVISOR'S POST |
| G PASSAGE         | T TELEPHONE          |
| GD CLOAKROOM      | V HALL               |
| KG TEACHERS' ROOM | WF WINDSCREEN        |



# THREE-STOREY FLATS AT ADEYFIELD FOR HEMEL HEMPSTEAD DEVELOPMENT CORPORATION

Chief Architect : H. K. ABLETT, F.R.I.B.A., M.T.P.I.

Principal Co-ordinator : P. R. BEE, A.R.I.B.A., A.M.P.T.I.

Principal Assistant Architect : H. SCHOFIELD, A.R.I.B.A.

Senior Assistant Architect in charge of flats contract:  
M. HARDSTAFF, A.R.I.B.A.

Assistant Architect on flats contract : T. L. LILLEY.

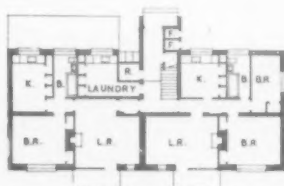


The first block of flats nearing completion.

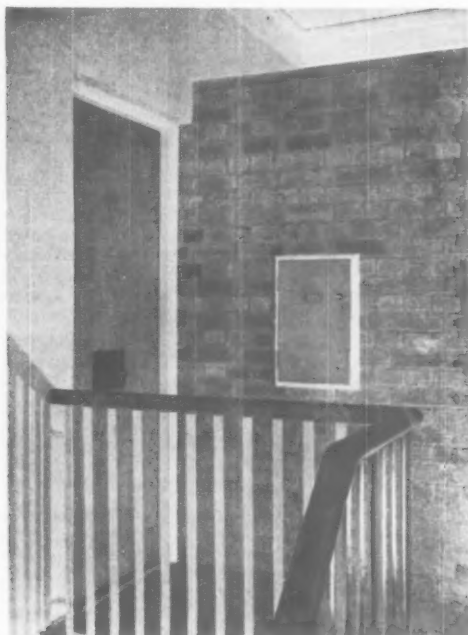
THE first neighbourhood at Hemel Hempstead forming part of the new town is planned for 10,000 persons and is known as Adeyfield. It is proposed that the flats illustrated should cater for that portion of the new population who prefer the amenities offered in flats, do not wish to look after private gardens, and who are attracted by a rent which is lower than that produced by a house giving similar accommodation.

The flats are planned to accommodate one, two, three or four persons, with a communal laundry room planned on the ground floor. The floor areas are as follows: 1 person, 550 sq. ft.; 2 persons, 580 sq. ft.; 3 persons, 650 sq. ft.; 4 persons, 702 sq. ft.

In general, estate management policy will be to exclude from these flats families with children.

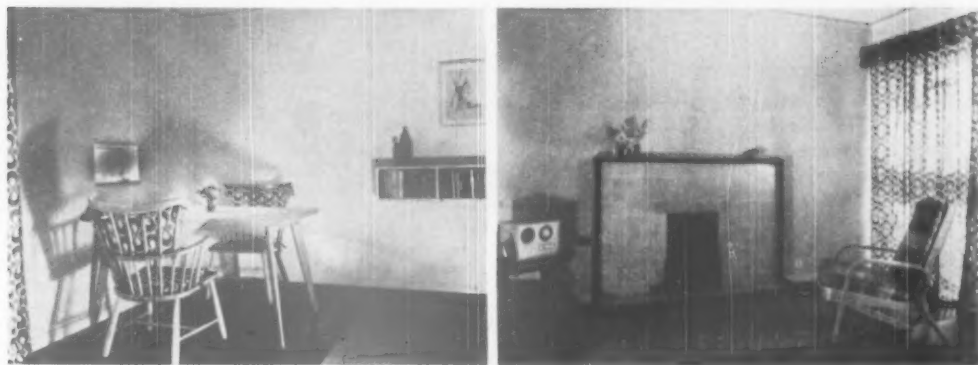


Rear entrance to 3 storey flats.



Entrance to an individual flat.





Two views of the living room, 2-storey flats.

These areas are inclusive of the communal staircase, refuse room and wash room. The basic block of six flats planned in three storeys has been designed to meet a demand for low cost accommodation: at the same time a high standard of materials and workmanship has been maintained. They are so planned that the block of six flats can be used, as in this case, individually, or the blocks built together in various ways to meet the requirements of the various sites upon which they will be built.

The three storey solution for flats is one which commends itself on grounds of economy. No lifts or special escape staircases are required and open fires can be used without difficulty of fuel storage or collection, and the outer walls can in some cases continue for their full height at 11 in. thick. The walls being load-bearing, the basic economy of keeping the block as deep and as short as possible consistent with the provision of interesting and acceptable rooms (thus enclosing the maximum cubic content with the minimum material) has been made.

The size of the lounges has been increased where possible by throwing what would otherwise be a passage, into the lounges, and a further feeling of space has been created in the lounges by planning the balconies directly in front of the large windows. Upon these balconies can be grown plants or flowers. The balcony railings are constructed of  $1\frac{1}{2}$  in.  $\times$   $\frac{3}{4}$  in. mild steel bars at  $2\frac{1}{2}$  in. centre in order that a restriction of view on to the balcony is achieved from the road without any loss of view from the lounges.

The outer walls are of cavity construction and the whole of the upper floors are insulated against sound transmission with a 2 in. floating concrete screed on a glass silk blanket which is laid on the precast concrete floors. Further precautions against

sound transmission are taken by insulating the party walls and by insulating the flush type front entrance doors to the flats and the doors opening direct from kitchen to lounge with compressed strawboard. The lounge windows are also planned at a reasonable distance apart on each floor thus minimising sound transmission. The lounge windows on separate floors are shielded from those either above or below by the projecting balcony and any embarrassment which might be experienced by the tenants during the summer months when the windows would normally be open, is minimised.

The 9 ft. by 6 ft. 9 in. lounge windows are composed of standard metal window and door components with a built-up transom to give added strength, the whole of the windows being rust-proofed.

The open fires are of a long burning type with back boilers serving a hot water cylinder in the airing cupboard, which in turn is tapped to take an immersion heater if desired by the tenants.

The communal staircase lighting is operated by a time switch wired in parallel to time lag switches in order that when all the lights are turned off at night, by the time lag switch, they can be economically operated by later arriving tenants. All the bedrooms, the kitchens, and the lounges are fitted with 13 amp. shuttered socket outlets and provision is made for supplying either gas or electric cookers. The clothes washing room has a gas heated drying cupboard, a clothes boiler and a sink heater; an open air drying yard is provided, in addition, between each pair of blocks, at ground floor level.

The colour schemes are chosen to provide a lively result; due care having been taken to ensure that the tenants are provided with a background which

will not dictate too severely the colour of their furnishings.

All door furniture is of silver bronze, the front door knockers and main entrance door pulls having been specially designed for the scheme.

**QUANTITY SURVEYORS:** H. J. Venning & Partners, 16 Gower Street, London, W.C.1.

**GENERAL CONTRACTORS:** The Circle Construction Co. Ltd.

#### NOMINATED SUB-CONTRACTORS:

**Pre-cast Floors:** The Helical Bar & Engineering Co. Ltd.

**Electrical:** Henry H. Gale.

#### NOMINATED SUPPLIERS:

**Bricks—Heather Rustle Facings:** Broad & Co. Ltd.

**Windows:** Ideal Casements (Reading).

**Joinery:** Walter Lawrence & Son Ltd.

**Sanitary Fittings and Fire Surrounds:** Ashley Brandon (Kensington) Ltd.

**Floor Finishes:** "Granton" tiles by Caledonian Concrete Products Ltd. Quarry tiles by Dennis Ruabon Ltd. Concrete tiles by Langley London Ltd.

**Reinforcement:** Twistee Reinforcement Ltd.

**Paint:** Water Paint—Hadfields (Merton) Ltd. Hard Gloss Paint—Jenson & Nicholson Ltd.

**"New Marathon" Fires:** General Light Castings Ltd.

**Roofing Tiles:** Radway Tile Co. Ltd.

**Artificial Stone:** Western Bros. Ltd.

**Metal Work:** Clark, Hunt & Co. Ltd.

**Door Furniture:** Nettlefold.



General view of the warehouse. The canopy projects 24 feet and protects sacks of flour during outloading to vehicles.

## EMPIRE WAREHOUSE, VICTORIA DOCKS for Messrs. Joseph Rank

architects: T. P. BENNETT & SON

**D**URING the heavy air raids in the London Dock area, Messrs. Joseph Rank's "Empire" Flour Mill suffered severe damage. The original warehouse was completely demolished by enemy action, and since then there has been considerable difficulty in dealing

with the non-stop output of flour from the mill. The new building which occupies the site of the original, has been designed by the architects in conjunction with their clients.

The siting of the new warehouse in its original

position was necessary in order to link up with the existing milling plant. This plant conveys the flour and by-products after the grain has been processed and ground. The flour, packed in sacks, then has to be conveyed in the most direct manner to the vehicles of transport.

In designing the new building, account had to be taken of the existing conditions of access and egress for railway trucks, heavy road lorries and trailers, together with transport by ship and barge. To provide the link to the various means of transport a series of spiral and inclined planes shoot the flour sacks from the packing floors to the required position at first floor level. Those chutes deliver to road vehicles on the east and west sides of the building, on the south to railway trucks and on the north to a conveyor gantry providing delivery to water-borne transport. Cantilevered canopies have been designed up to spans of 24 ft. in order to protect flour sacks against weather during outloading to vehicles.

Upper floors and pent house each have a typical area of 12,000 sq. ft. On each of these floors the latest type of plant for packing flour by machinery will be employed.

Floors have been designed to carry a superimposed load of 300 lbs. per foot super. They are constructed in precast concrete units with plastered ceilings. Elaborate precautions have been taken in the floor construction to avoid infestation. Maple strip flooring has been used as a finish, which is the most suitable timber for this important function. Special bays have been constructed in solid timber to carry the packing machinery. This is necessary owing to the intricate system of spouts and elevators which link the machines between floors.

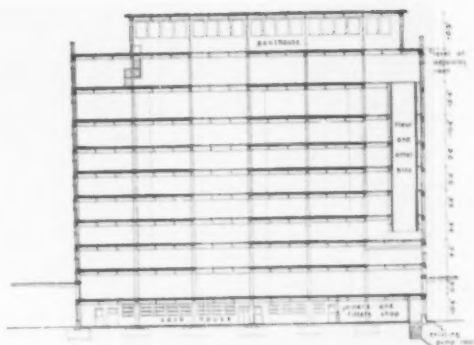
One of the principal constructional features of the building are 14 bulk storage bins which contain the output of the mill and so feed the packing machinery. These bins are constructed in reinforced concrete with an exceptionally high quality of finish. They are contained within the enclosing walls of the building, and are each some 60 ft. in height.

External walls have been built in white sand lime bricks to match the construction of the existing undamaged premises. Brickwork and floors are supported on rolled steel framework, which was erected upon the undamaged pile foundations.

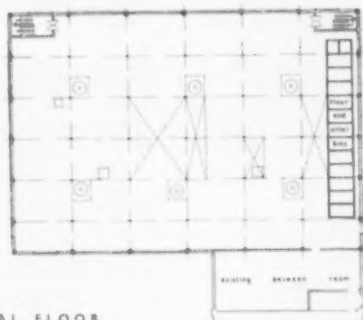
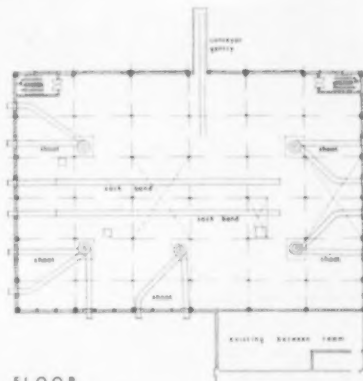
The positions of the reinforced concrete staircases required by fire regulations, together with the position of the bins and the floor to floor heights, were contributory factors in determining the external appearance of the building. The chief factor in this respect, however, was the requirement to provide the highest possible sill level, in order that flour bags might be suitably stacked against walls, at the same time to provide the best possible natural lighting conditions.

The ground floor of the building contains various administrative offices and is devoted to the maintenance of the mill.

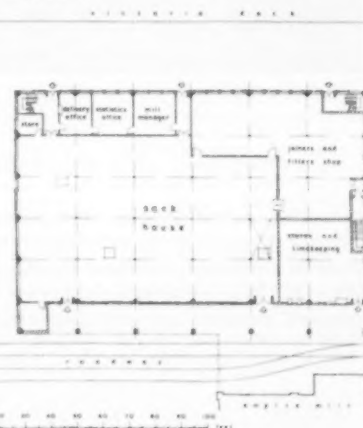
The overall capacity of the building is approximately 1,400,000 cubic feet with an overall height of 123 feet.

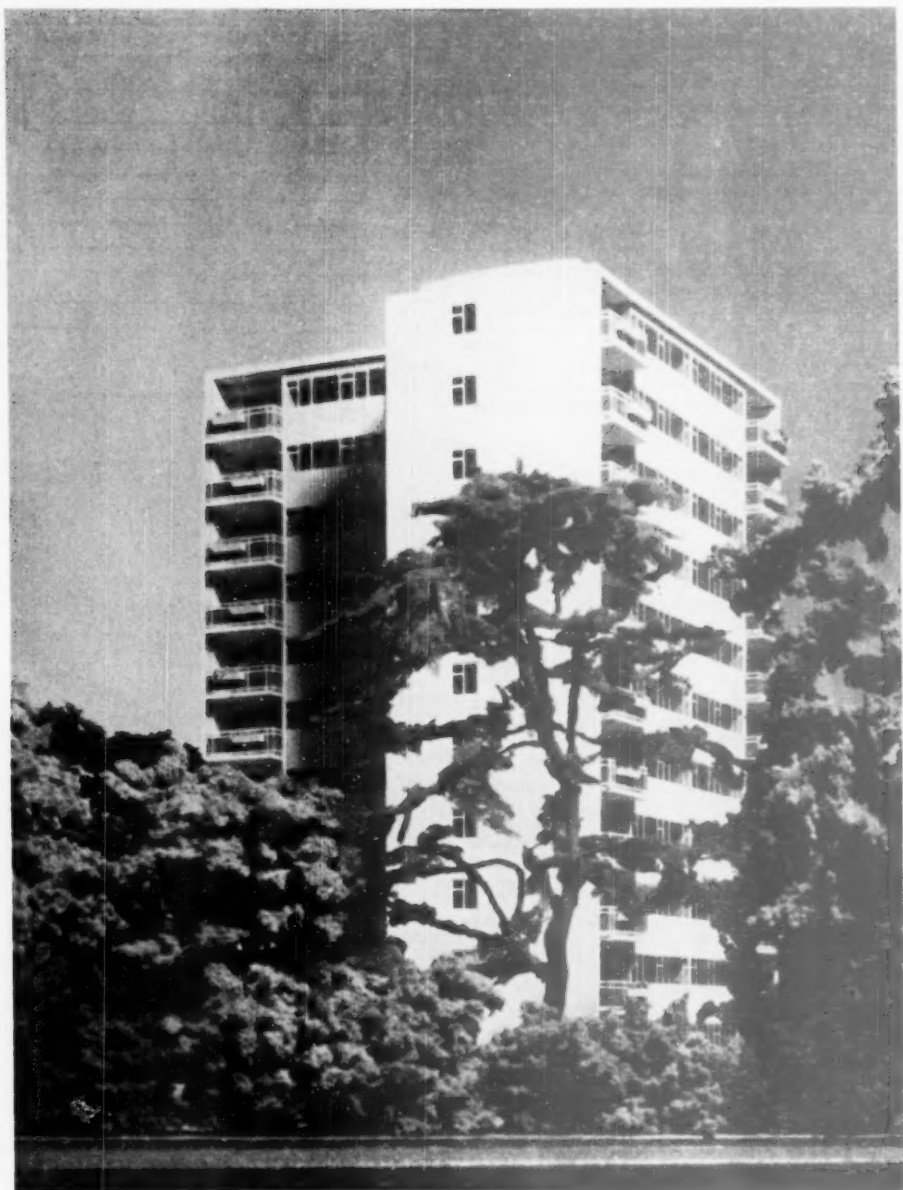


SECTION

TYPICAL FLOOR  
2nd-8th

FIRST FLOOR





L.C.C. HOUSING SCHEME, WANDSWORTH

ARCHITECT TO THE COUNCIL: ROBERT H. MATTHEW, A.R.I.B.A.

In November 1948, general proposals were announced by the L.C.C. for the development of fourteen sites in the districts fringing Putney Heath and Wimbledon. Next year work will probably start on three of these sites—23 acres in extent—to the north and west of Inner Park Road and bounded by Princes Way on the east and Wimbledon Park Side on the west. This view shows a model of one of the eleven-storey T shaped blocks of flats, nearly 100 ft. high and containing 32 flats each, which will form a special feature of the mixed housing development.

## POINTS FROM PAPERS

## LANDSCAPE IN HOUSING DESIGN

Report of a lecture given by PETER SHEPHEARD, A.R.I.B.A., at the Town and Country Planning Association on November 8

IT is impossible to say where architecture ends and the landscape design begins. If you are dealing with a civic centre or a large building which is isolated, there is a certain difference between the building itself and the surrounding ground, which has a different use and is a garden or something quite fundamentally different from the building; but in houses or flats the distinction between the building and the garden is blurred; the distinction between the garden and the playing space for the children is blurred also. Thus the whole entity, the houses, their gardens, and the attached streets, make one composition, which means that either the architect has to work in the closest possible collaboration with the landscape architect or has got to be the same person.

It is even noticeable in modern housing layouts that the distinction between the street and the garden is becoming blurred. It has always been assumed in the past that the street was a public way which was looked after and maintained in quite a different way from the private land at the back of the houses, but I want to mention several other things which are affecting that in the sense that the houses are beginning to extend into a garden behind, which again extends into perhaps a common garden, and the houses may not have a street in front of them, or, if they do, it may be only a small one or a foot-path; so that, there again, the general modern feeling is that the houses and their gardens are part of one integral piece.

By discussing only one part of housing design and by trying not to talk about layout of the house itself or its access roads, I do not want anyone to think I am implying a split between architecture and landscape, or that one can be designed in the first instance and the second be designed by someone else later. Nothing is more important than a full appreciation of the landscape potentialities of the site by the architect and the landscape architect before anything is done at all, and in that sense the preservation of what is there, particularly the trees, is vitally important.

Housing, it seems to me, has only one aim, and that is to provide good living conditions. That aim can be divided into three main parts:

(1) Convenient and comfortable and safe accommodation, which is the architect's job;

(2) A good social setting, which is the planner's job; and in saying this I do not mean only schools and social facilities, but the whole planning of the neighbourhood to be such that its roads do not divide the place up and the railways leave areas which are beyond the tracks in the American sense of the term;

(3) A pleasant atmosphere—all that we mean by the word "amenity," which means a lot of different things to

different people but which, translated, just means pleasant.

I think we ought to agree first that you cannot have a good landscape setting for the housing estate itself unless there is a good landscape setting for the town. You must first have a major open space system; and when I say "system" I mean system, and not major open spaces, as you very often have them, without there being any system of which they are a part. Most English towns are astonishingly well provided with large parks. That is the case in London, for example, but London does not look a green city in the sense that Paris does, although Paris has no park of anything like the size of the London parks, simply because there is a bit of greenery running along all the streets, which gives a green impression to the town without its being a very large area.

Then there must be a minor open space system which is absolutely bound up with the design of the houses. The minor open space system, until very recently, was completely lacking. If you allow the speculative builder to deal with your housing, you get every possible use made of every inch of ground where the houses go, and the general trend of both speculators' operations and the local authorities' who were trying in vain to look after them was to create public streets and private gardens, the public streets being as narrow as they could conveniently be and the private gardens having everything else. Then, of course, between the two there was the enormous amount of waste space left over by the speculative builder of which I do not think anyone has enough appreciation.

Many people talk about open spaces being difficult to provide in cities, and I am always asked, in regard to the new towns, "Is it not an awful waste of agricultural land?" But the density of most of the suburban development round London is not 50 or 30 to the acre, as is suggested for the new towns, but something like 10 persons to the acre when you measure all the waste space left by the builders. Even the new towns density of 30 or 50 is much more than the spread of the suburbs.

I very much feel that here one ought to think out the whole thing again. One example is the garden-common idea, which is only one solution of the problem. With that layout, the street is narrow, just giving access to the houses. The back is completely opened up first of all to small private areas for sitting out, paved, with shelter and privacy, and extending perhaps on to longer gardens for those people who want to cultivate them—although some of them could be chopped off and made much shorter—with the long gardens going into a common garden going back a certain distance, instead of having a fence. The shapes of these garden-commons could vary very much.

I would say that generally the chief advantage of that kind of layout is that it enables the street to be used for vehicles going in one direction and the common-garden space can be used for completely different pedestrian access system. You can have a street system which is looped, or culs-de-sac going into the houses, and from the other direction there could be paths going out to other routes which form part of the major open space system and which leads to the schools, shops and so on.

The atmosphere, the appearance, of housing, is I think, almost always thought of in connection with the photograph of the street. It should be thought of not as a photograph; it should be thought of as a series of views seen from the ground by someone whose eyes are not fixed forever in front of him with black frames round the edge. It is important not to use, except for an architect's own clarification of his own ideas, models or cameras to illustrate housing. The model gives a view from above which is, of course quite different from the view from the ground. It encourages all kinds of pattern making. It encourages the idea that houses laid out in very pretty patterns, with very slight divergent angles, will look nice on the ground; but, of course, they will not, because you cannot see the divergent angles when you are on the ground. Above all, the photograph, viewed from a single point, is extremely misleading because one's eye just does not stop at a single point and look from one direction only. Therefore, I should have said that during design one should make the maximum possible use of hundreds of small sketches from different points of view.

Apart from the use of high flat blocks, which I think will be limited in this country, housing is a small-scale affair. The landscape shows through it. Houses are, as everyone knows, about 17 feet to the eaves and trees are mostly 80 feet high by the time they are full-grown, so that the trees and hills and slopes, and even quite small vegetation, are all much more important from the point of view of appearance than the houses themselves. Not only the trees, but every possible aspect of the housing estate has an almost greater importance than the design of the houses.

Take lamp-posts, for example: it is nearly impossible to obtain a well-designed lamp-post in this country. It is almost impossible to persuade the local authorities to use reasonable designs for kerbs and street furniture, telephone poles and the hundreds of other things of that sort which have a disastrous effect on the landscape appearance.

First, the proper design of roads and footpaths is really a question for the planner, but it does have a fundamental effect on the landscape. The road, for example, should be thought of as a service to the houses and not *vice versa*; the roads should not be laid out and



then have the houses put on it; the houses should be laid out first and then the roads should get to them in the most convenient and economical way. If one takes that view, one finds that one needs far fewer roads than ever were put into housing estates before the war.

Generally roads are too large in housing estates. The maximum sizes for roads in housing estates should be 13 feet, 16 feet and at the very most 22 feet, and the maximum amount of short and looped culs-de-sac should also be used.

There are many small points of detail about roads, and particularly kerbs, which could very often be left off, as at Welwyn. It is very impressive that at Welwyn there are no kerbs on the minor roads, which look extremely pleasant.

The layout of the footpaths can be even freer than that of the roads. Footpaths, for some reason, are always placed along roads, whereas they can be completely independent, wandering round trees and away from the roads. It is extremely important that a footpath should be drawn on the plan as the shortest distance between the two points which are being traversed by the public—you will never get people to walk anywhere else. If that is so, one should do that on the plan, and then design the footpath by eye-level sketches, because the pleasantness of the view of a path is very often improved by a slight curve. It should be remembered that a footpath which curves a small amount will not cause short-cuts because people will follow the curve quite nicely, but if you look along it the path looks as curved as one that has a very much sharper curve; and, of course, in the same way all the angles are flattened out.

I will now say something about trees. Trees are, of course, by far the most valuable assets to any housing area.

The public attitude to trees is most extraordinary, and an amazing amount of ignorance about trees is prevalent among people who are supposed to be able to look after them. The attitude seems to be divided between extreme sentimentality, the attitude that will not allow any tree to be touched or pulled down even if it is really dangerous and the attitude of complete hatred of trees which seems to exist on the part of certain members of the public. Lots of people will not stand for a tree anywhere near a house and will cut it down if it grows. Between those two points there is the obvious common mean that one ought to regard trees as one of the most important things in a housing estate, but that they ought to be placed and preserved in places where they will not interfere either with the houses or with traffic. It is not at all difficult to find places for very large trees in any well-designed housing layout without wasting space and without overshadowing the houses.

I think that unless there are these very large trees allowed to grow to full size or those that were there are preserved at full size, every housing estate has a look of immaturity and is very often actually also unpleasant because of wind, and so on.

I have been surprised at what I have been able to do to stop people treating trees badly by making myself a public nuisance and writing to them. I have even sent little sketches to them to show them how to prune trees properly. Hardly more knowledge of trees is

required than that of the vandals on a housing estate in the North of England who go through the trees with a penknife, knowing that if you cut an eight of an inch round the tree, it dies—hardly more knowledge than that of trees is necessary to prune trees properly.

Grass, of course, is the other essential part of greenness. A lot of emphasis has been put lately on omitting grass wherever possible because it takes too much money to maintain. It is true that it is no good putting grass in very narrow verges, and it is much better to have paving of some kind, even if it costs more; but grass is important because it does have a bright green look throughout the year. I think it is not as expensive to maintain as people make out if it is not maintained at such a lawn-like state. It seems to me that there is a general reluctance to allow grass to grow about six inches long and to mow it two or three times a year instead of fifteen times a year. That seems to me to be a mistake. I think a great deal of grass would be used in places where the maintenance would otherwise be too expensive if it were left to grow a bit longer and the roughness and weeds were tolerated. That would enable a great deal of planting in the grass of bulbs, plants and natural plants of all kinds.

On the subject of natural plants, I would like very much to make a plea for naturalised plants. Anyone who has seen pictures of the gardens in the Swedish parks will know that this sort of thing has transformed the Stockholm park scene. The grass is often left to grow quite long and in it are plants which grow in the Stockholm woods, such as foxgloves and cow parsley, which are normally regarded as weeds, and which any self-respecting parkman usually hauls out at sight. These plants grow vigorously to ten feet high and make the whole place look as if it were part of the landscape. The plants look as if they want to grow there.

The sort of plants I am thinking about are the cow parsley, which can be seen at, among other places, Regents' Park, near the children's playground at the top end of the lake, and the polygonums, particularly the climbing one, and several other ones with stems rather like bamboos, which grow ten feet high. These are often found in Victorian gardens, but are nearly always pulled out because they are weeds, which of course they are in a tiled garden; but if they ramble about among trees in an open space, they look very well.

Coupled with the plea for roughness and naturalness in plants, I should like to say that roughness is, of course, an advantage. For some inexplicable reason, gardening and tidiness are almost synonymous in England, particularly in parks and at the fronts of houses. The average local authority's idea of a well-kept open space is one which is mowed and clean and tidy. There is a great deal to be said for that, but there is also a great deal to be said for roughness as long as it is confined to plants and materials, and particularly materials such as old walls and barns.

The climbing plants, again, are part of this natural scheme, particularly the ones which are always pulled out, like wild clematis or old man's beard, which destroys hedges in the country but

which, grown in the town over old walls and corners or even poles, looks extremely well. Then, of course, there is the best of all English plants, ivy, which for some inexplicable reason has a reputation for pulling down houses, whereas I am convinced that it has kept some houses up. The thing to remember is that grown on a good brick wall, with no cracks, it will keep the wall dry for ever and preserve it; but grown on a wall where there are cracks, the ivy grows inwards and away from the light and sticks to the wall, and if it manages to get a shoot through a crack in the brickwork, the shoot will go on growing and heave the brickwork down in a short time. It is a preservative up to roof level in all new brickwork.

No landscape designer should forget that what matters is the appearance of things, considered all the time from the point of view of a person walking about the landscape and using his eyes. Trees should be placed so that they are seen consciously at certain positions. Views of trees are as important as views of church spires. It is just as important to see them against the sun, if that is the way you want them to be seen, as it is to see a spire against the sunset. It is as important to place white cherry trees against dark trees, and so on. All that sort of thing is fundamental to the design of landscape and cannot be done if one designs it on a piece of paper. It must be done by imagining oneself on the site.

Finally, I must say something about after-care, which is a fundamental part of landscape design. It is no good making a plan which either cannot or probably will not be maintained. The maintenance is an essential cost of the scheme and must be reckoned over fifty years or so. The after-care by the public of one's plants and paths and greens must be considered from the start.

In this connection, things have got so bad in England with regard to the attitude of ordinary children to plants and greenery generally (and not only children), that it needs a big campaign of re-education in the schools to make it worth while to do any design at all. I have enormous faith in the possibility of this. I do not know whether anybody now present has seen what has happened in Bermondsey, where they planted 7,000 trees in the streets, and did so in some cases in places where trees never should have been planted, because they were much too cramped; but this planting has transformed Bermondsey, even if they have to prune the trees to stop them pushing in the windows. By a very intensive campaign of education in the schools they have achieved an almost complete lack of vandalism.

There is what I would call the law of diminishing vandalism, which is that if you plant trees, in the first few weeks you have 50 per cent. of them destroyed or pulled up; and if you plant them again, 25 per cent. are pulled up; and then the third time you plant them, the children have lost interest in them altogether. They found in Bermondsey that it took a year or perhaps rather less before the trees as objects for children to play with just lost their attraction. That ought to be remembered, and one ought to persevere with one's landscape efforts beyond the first initial shock of having the first plantings interfered with, probably quite badly.



# The Mistakes of an Architect

## Seeking Tranquillity

By EDWIN FORBES, F.R.I.B.A.

IF you intend to try to become an architect pray God for a sense of humour. This art I am told can be cultivated—even the Scotch have been known to show a glimmer of it.

Don't think for a moment that by acquiring this you will be successful, far from it, humour and success are strange bedfellows, but when travelling home in your suburban train, or sitting by your fireside, or even in front of that abomination known as an electric fire, it will soften the blows you have received during the day from the letters of wrath from clients, lawyers, contractors and others (and remember you require a very special humour to deal with lawyers!). If you have it it will give you a sense of tranquillity which will endear you to your wife and family, and, if you are very young, to your "girl friend."

At the very outset in your first year at the A.A. you will have to choose between humour and success and if you choose success throw humour out of the window—it will never be any use to you. Remember you may never know what happiness is but you will be successful. You have made the first mistake but you have done it with your eyes open.

The next move towards success is to take elocution lessons so that on the quite unnecessary committee you push yourself on to you will have learnt how to co-ordinate your ideas and how to prove that all the other members on your committee are wrong.

You will find after a little practice that you will have moulded them into a very pliable state and at that point seize the chairmanship and never make a joke.

In a very few years (if your elocution master is any good) you will be somebody to be reckoned with. Of course you will have to attend every meeting to do with the Institute and all the other architectural bodies, always sit in the front row and always talk and keep on talking. It doesn't in the least matter what you say. You are now in practice at the age, say, of twenty-five and beginning to make mistakes, lots of them.

One of your first jobs will be for a neighbour and it generally is an addition to an existing house such as a sitting-room with a bedroom over.

The first thing to learn when you start building is don't dominate the foreman: listen to him, he generally knows far more than you will ever know, and because he wears a cigarette behind his left ear you may think him lacking in respect but keep on the right side of him and learn to listen. If you snub him you will find that he will revenge himself by carrying out your plans and specification to the letter and then you will be in a mess. This will only happen when you are very young, as it did to me.

On one of your first visits the foreman will present you with a list of things

that you have forgotten and to correct those errors you will look wildly round for savings and sink your floor level a foot to save brickwork and have a damp house for ever after.

Send in your extras to your client before you carry them out. It takes a little moral courage but it is well worth it. It is how you finish a job that counts when you are young and doing small work.

I don't know how to describe what is called a happy atmosphere on the job, but it can be created by listening and then making your decisions, but not egotistically.

If you can persuade the client that he has designed the house and that every detail is his idea and that you are only carrying out his wishes, you can nearly do anything. If you can at the same time get into the contractor's mind that your reasonable, good construction is his idea the job will go along swimmingly.

There are two opinions on every subject and when in your mind they are both equally good give the other man the benefit.

This all sounds a little "weak-kneed" but by not being stubborn you will gain your point every time.

You are now getting into larger work with much more responsibility and you are getting into a position to be shot at. This is where you should take out an Architect's Indemnity Policy at Lloyd's!

You may make an error which is in many ways not your fault such as choosing a wrong material, omitting to discover dry rot for which the client can make you financially responsible. Such insurance policies cover you up to £5,000 and have saved many an architect from financial ruin.

If you are one of the "first ten" you can sail through your mistakes and get away with it, but the majority of us are small offices and cannot afford a financial bombshell.

If one goes over the things that may happen to us, it is a marvel we are alive. I reckon that eighty per cent. of architects are small firms. A principal, a draughtsman or son and a secretary, and there isn't much to spare. Therefore it is very wise to come under the financial protection of an insurance policy.

Some have the good fortune to be fed with structural reports from firms of lawyers or agents (a dull business). They have their pitfalls, generally from want of experience. I am talking of properties of the value of £5,000 to £10,000.

The house is usually occupied and full of furniture. There is no ladder to get into the roof and all floors are covered or stuck down with linoleum. The vendor presses coffee or sherry on you, continually explains that the house is in perfect condition, follows you about from room to room, and gets you completely moithered, and this

happens till you learn to deal with him firmly.

With the best intentions in the world it is quite easy to miss a point and then you are for it.

The easiest way is to start with the foundations and external walls. The damp proof course, the rainwater pipes, the gullies, which are always choked, and the overflow running in under the floors. The cracks in the main walls which you cannot see for creepers. The tiles that are all flaking.

The damp round the chimney stacks and eaves, the dry rot under the ground or basement floors and round the eaves owing to choked gutters.

The ground floor skirting often gives you a clue.

Then you are supposed to test the electric light and hot water system.

The perfect "Structural Report" on small property has not yet been written but still you are doing them at least once a month and are still alive.

With regard to new buildings, the pitfalls are many, but one of the most usual is not deep enough foundations in clay soil.

To go towards your client one doesn't take the foundations deep enough or with enough spread or reinforcement. This is generally done to save the client's pocket. It is a kind thought but it gets one into trouble. They should always go a foot deeper and a foot wider than you think necessary, and paving should be built up against the building in the south and west sides.

Another pitfall is the vertical cracks in gables which only appear on the outside of the hollow walls in new work. I am not quite sure what the cause is as everybody has a different answer. Of course if a bomb fell within half a mile of it you have an easy answer, but if you try to get it out of the War Damage Commission they have an answer also and that is the cement mortar, and I don't pretend to understand it.

I use only lime mortar because it lets the building settle more evenly and doesn't crack the bricks, the hair cracks follow the lime joints and everybody is happy.

You will find that there appears to be less movement in a house built of lime mortar.

The curse of this generation of buildings is dry rot; even my tranquillity is upset. It is always on the increase. The 18th and early 19th century buildings in Edinburgh are full of it and a suburb of Edinburgh that was only built fifty years ago is the same.

While in London we haven't started to tackle it but it is found in nearly every building you report on.

If we would only leave an air space round the ends of the joists and attend to the rainwater down pipes that are always percolating under the floors all would be well. I have found this is the main trouble. One of the other troubles is a vegetable felt which was used fifty

years ago and which is the delight of dry rot; it should have been mineral felt.

Torching the underside of the tiles which was fashion at the same period is disastrous.

I find the Government Research Stations most helpful on any material you are not sure of, especially for all those new materials that are appearing daily.

On occasion you get insufficiently burnt tiles taken too soon out of the kiln which after forty years have all gone back to their natural parent—clay.

A tile should be well burnt, hand made, with a camber both ways. You have only to break a tile to see if it will last.

I was once persuaded to use a very cheap damp proof course. The client died of rheumatic fever and I have used double course of slates ever since.

There are so many examples of mistakes one could give.

There was the building that had a very large tile floor that was laid very quickly, one morning it was found that the whole floor had risen and was a beautiful curve. This happened because the tiles were not wetted, had been laid on a very dirty floor of loose cement and dust. The concrete had a lot of heating pipes in it and had not been scraped or swept.

Of course this was the contractor's fault but what had the Clerk of Works been doing and where was the architect? The job which had been a happy one finished in complete hatred.

The floor was properly relaid by the contractor free of cost, but the client always felt that in some ways the architect was to blame. Remember you are always there to be shot at.

The funniest mistake was the plastering of a large country house in which a large gang of plasterers was employed.

Adjoining where the plaster was mixed there was a large heap of ground up ashes. The labourers mixing the

plaster found it more convenient to mix the ashes with the plaster as well as sand. Some time after when the heating was put on to dry out the walls, the walls and ceilings developed millions of pimples, each grain of cinder exploded, some chemical action took place, and they were in an incredible mess.

The whole of the walls had to be hacked off and the lath and plaster to the ceilings renewed. Again the contractor's fault, or sub-contractor's or the plasterer's labourers, but that didn't matter, the client never forgot and mentally the architect was blamed.

When mistakes occur I have always tried to act on the very good advice of an old chief: "When there is trouble always go and see the client, don't write." When acted on that advice has helped me a lot.

About extras on contracts I have only finished once below the contract amount and that was when I filled up every trade in the specification with contingencies.

When I presented the bill with no little pride I was well cursed because if the client had only known he would have spent more! I have never made that mistake again.

If I had a large practice I would employ two separate firms of Quantity Surveyors, just as we did with the butchers before the days of rationing—a little healthy competition doesn't do any harm.

The Quantity Surveyor is by far the luckiest man in getting away with his mistakes, he simply buries them in brickwork or concrete and is paid for doing so and nobody is the wiser.

Contractors are just like us, good, bad and indifferent, but what a joy when you come across a good, I mean a really good one, and don't think real craftsmanship is dead, it crops up in all sort of places if it is given a chance. We should all encourage it.

Another point about contractors is when you send your list to the Quantity Surveyor for tendering, don't include any names that you have no intention of giving the work to if they are lowest. When you invite, the lowest tender should always be accepted, otherwise don't invite. I only once did it—the lowest contractor called and told me exactly what he thought of me—most unpleasant!

One could go on for a long time writing of what we are up against and possibly you know all the answers very much better than I do. The cure, or mainly so, is supervision and again supervision, but of course on some jobs it is an awful bore and those are just the jobs that require the most visits. And don't forget with all the present new materials use the Government Research Stations all the time and even then you will get caught out.

The only time there is tranquillity, and it does happen, is when you have a client who has complete confidence in you, a really good contractor, a keen foreman and a tactful and understanding Clerk of Works and a fascinating job. When you collect this perfect combination you can go off to the South of France for a very long holiday!!!

And now that you are one of the "big ten" and are reaching your journey's end, thanks to those early elocution classes, you can demand consultants for nearly every trade in a large building, but do you feel safe?

Do you not find that the consultants on occasion make even bigger mistakes than you have ever dreamt of.

Well, you may know success, but do you know the meaning of that word tranquillity?

After having been in practice for over fifty years the past takes on a rather golden haze, but whichever way you take it, it was, and is, a damned good life, but to-day only with a sense of humour will you reach tranquillity.

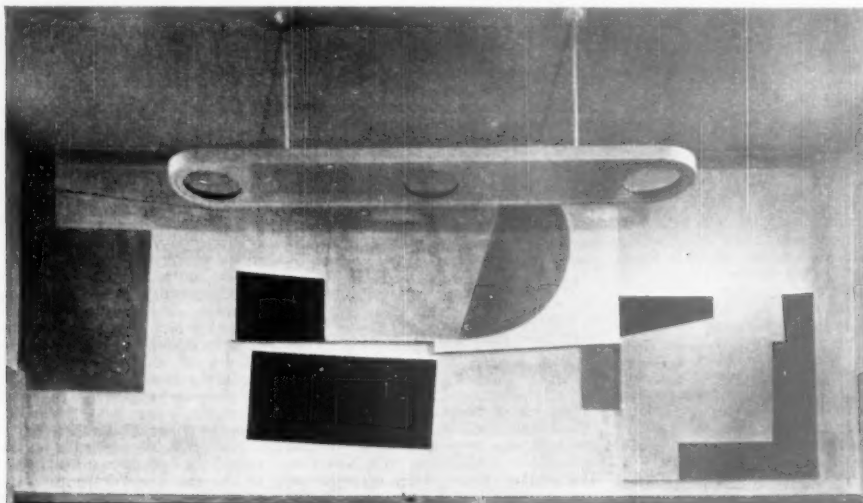


Photo by Westwood & Johnson.

Mural by Victor Passmore, measuring 8 ft. by 19 ft., in the canteen at Kingston-on-Thames Bus Station

# NEWS of the BUILDING INDUSTRY

## TECHNOLOGICAL EDUCATION

Reporting in 1945 the Committee led by Lord Eustace Percy said that "the position of Great Britain as a leading industrial nation is being endangered by failure to secure the fullest possible application of science to industry, and this failure is partly due to deficiencies in education." This dictum is quoted in the Report, now under review, in an early paragraph, and it can be said that the whole purpose of the National Council's work which included the examination of evidence from 145 separate bodies, is to advise how best to repair this position and to suggest how higher technological education should be developed in this country. The Council has envisaged its main task to suggest how the contributions of the technical colleges could be improved and expanded to meet "not only the needs of industry, but also those of the individual student." It must be pointed out, in passing, that the contribution of the technical colleges is already considerable. For instance, in 1948, 7,100 students were taking full-time courses of a degree standard with a further 9,784 taking part-time courses.

The Council consider that, given a radical improvement in finance, equipment staffing and accommodation, the technical colleges could, and, indeed, should provide more high-level courses of a degree standard, and also courses for post-graduate work. Paragraph 25 of the Report makes it quite clear that all of the 145 bodies consulted were unanimous in the opinion that there is "an urgent need to effect a radical improvement in the conditions under which the colleges work" and in paragraph 27 the point is made that the limitations due to inadequate premises should be speedily removed. It may be said that all else in the Report is conditioned by these recommendations and in the light of the current economic situation, particularly having regard to the increased need for rearmament, the whole educational building programme would have to be re-examined before the Report is carried into effect. The capital investment programme might have to be re-cast, although no precise estimates of the amount involved are given by the Council. In making any assessment, the whole question of building priorities, particularly in view of the recent housing debate in the House of Commons, will have to be looked at.

In order to give students at technical colleges encouragement to undertake the advanced courses in technology, recommended in the Report, the Council believes that some suitable award should be given. It therefore recommends that new awards of degree standards should be made, and suggests that a Royal College of Technologists should be established, which would co-ordinate the work, approve the courses

**A REPORT** which, if its provisions are even partly adopted, will have far-reaching effects on the face of British industry, was published last week by the National Advisory Council on Education and Industry.

The report, somewhat portentously entitled "The Future Development of Higher Technological Education," H.M.S.O. 1s., is the result of two years intensive investigation by the Council, the chairman of which is Lt.-Gen. Sir Ronald Weeks, and whose members include representatives of the local education authorities, the universities, teaching staffs, employers, employees, and certain specialists appointed to the Council by the Minister of Education. The Council also has the advice of assessors drawn from the Ministries of Education, Labour, Agriculture, and from the Treasury and the University Grants Committee. Among the Ministerial nominees are such well known building industry figures as Capt. A. M. Holbein, Mr. A. L. Peyman and Mr. Sydney Tatchell, F.R.I.B.A. It can thus safely be assumed that the special problems of the building industry were examined.

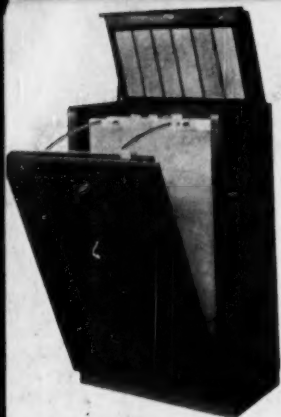
and confer the awards. It is suggested that there should be an Associateship of the proposed College as the first award, Membership as the second award and Fellowships and Honorary Fellowships to those who further distinguish themselves in technological education and research.

The Council recommend that the Royal College should consist of a Court, assisted by a Council and an Academic Board. The Court to consist of 16 persons of eminence in the field of technology, to be appointed by the Crown, 4 representatives of the Council and 4 of the Academic Board. The Council would include persons nominated by the universities, technical colleges, employers, employees in industry, professional institutions and local education authorities. The Academic Board would include persons from the teaching staffs of technical colleges and universities and men and women specially graduated in educational matters chosen from the professional institutions and from industry. It is stressed that the awards of the new Royal College would be subject to the most stringent tests of proficiency and knowledge.

A whole section of the report is given over to the functions and methods of establishment of the proposed new College—which, of course will not be a teaching but an "awarding" body. If the awards made by the College are in fact to be comparable to university degrees, then the crux of the problem, Royal College or no Royal College, is still the standard of work in the technical schools. The Chairman of the Council at the press conference given on the publication of the Report, made it clear that in the Council's view, the function of the technical colleges, in the main, is to train men for industry, that

of the universities to train those for development and research. It is thus on the technical colleges that the main burden of the future would rest. And upon their improvement and expansion that the new Royal College will rest. At first glance it would appear as if the Minister of Education, when he comes to examine the Report, will be well advised to examine the proposals and recommendations which affect the technical colleges as a first priority. His chances of impressing the claims of technical education on to the Treasury planners at the moment may appear slender. The Government have not shown an inclination to depart from the rigidities of the capital investment programme. But it can safely be said that the technologists of the future are Britain's finest form of capital investment and that money spent and materials used in providing for their better training will pay the nation rich dividends.

The report serves as a focus for the consideration of the whole problem. It must be stressed that it is a *general* report, not specially having regard to the special needs of individual industries, although a synthesis of *all* industrial opinion has been obtained. For the building industry, the recent recommendations of the Working Party in regard to higher education must be remembered in considering the present Report. It is noted that among the bodies consulted were not only the R.I.B.A. and R.I.C.S., but also the Institute of Builders. It is to be hoped that when the Minister starts the consultations which he will have prior to acting on the Council's recommendations, he will take the opportunity of seeking advice from the various employers' federations on the day-to-day problems and requirements of the industry.



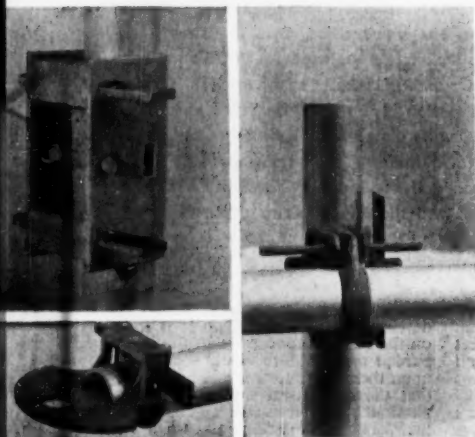
## FITTINGS

C 5/1

A vertical plan filing cabinet made of 14, 16 and 18 gauge steel. The cabinet weighs 230 lbs. empty and measures 51 1/2 in. high by 35 1/2 in. wide by 20 1/2 in. deep. Internal dimensions are 48 1/2 in. high by 32 in. wide by 18 in. deep. The lid contains a fitted visible index frame to take interchangeable index strips.

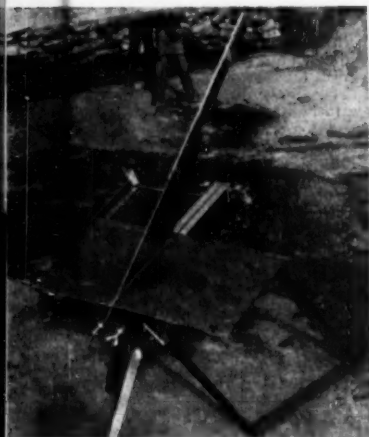
The plans are suspended on punched holders from plated curves attached, two to the front flap and two to the back. The holders carry index tabs and are pretreated for easy attachment to drawings by moistening the pretreated edge.

Drawings can be easily removed or replaced without shuffling or damage. They may also be read in position. The plan holders can also be used as "plan out" indicators.



## PLANT E 10/1

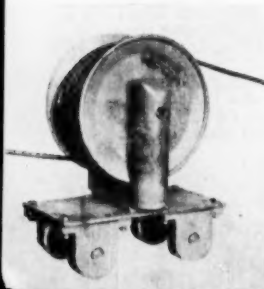
Three typical fittings in a system of scaffolding which relies on wedges for all connections. Top left, an end to end coupler; lower left, a putlog end; right, a double coupler. This system dispenses with the use of bolts, a factor which the makers claim reduces time and maintenance costs.



## PLANT

E 3/5

Claimed to leave a clear cut square edge, this asbestos cutter is designed for quick and easy cutting of large sheets of asbestos. The knife blade of stainless steel is freely held at its lower point in a grooved member. To cut a long sheet the knife is raised, the sheet is inserted and the knife is pressed down. To make the next cut the knife is again raised and drawn along in its groove to make an extension of the first cut. There is no need to move the sheet. This method should prove less fatiguing than sawing. The special frame illustrated is optional since the device can be quickly mounted on scaffold boards, etc. This picture shows a gauge attachment for the cutter.



## PLANT

E 11/1

A trailer type reel for paying out cable in opposite directions. The reel positions itself between electrical connections and plant being served.

## MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Associate Editor,  
The Architect and Building News,  
Dorset House,  
Stamford Street, S.E.1.

Please mark the envelope MOSAICS

## ★ INFORMATION ★ AND CATALOGUES RECEIVED

- \* The Council for Codes of Practice has issued for comment Code 231.302, "The Painting of Non-Ferrous Metals," prepared by a Committee convened by the Royal Institute of British Architects.

The code deals with the painting of non-ferrous metals in the forms in which they are most frequently used in buildings, e.g., metal claddings, linings, pipes, cast or extruded sections and fittings. The recommendations given relate chiefly to the methods of preparing the surface of the metals for painting, the types of priming paint suitable for each and the methods of applying the primer.

- \* The General Electric Company has issued a most useful pamphlet for those who have ventilation problems to solve. An introduction describes the main characteristics of the Aerofoil range of fans for which impellers and motors have been designed as a family. The die-cast adjustable impeller has been developed to give a wide selection of air volumes and pressures to be supplied at economical manufacturing cost. It is claimed that the sound made by the fans is relatively low.

A comprehensive list of tables gives the sound rating of various models in decibels. These tables show at a glance the most suitable fans for any required duty within the capacity of the range. For every step in volume and pressure the tables give the following data: Fan diameter; type of impeller (adjustable or fixed blade); motor frame size; blade pitch angle; fan speed; power input; sound level; total efficiency; fan total pressure. List prices are quoted for all models.

- \* A transportable bar of Waverite is a new development illustrated in the autumn issue of "Bakelite Progress." Erected, the counter is 16 ft. long by 2 ft. wide with 4 ft. returns at each end. For transport the bar is easily taken down to fit into a box measuring 4 ft. by 3 ft. 6 in. by 10 in. Further details are available from Waverite Ltd.

- \* "Zinc pigments in Exterior Paints" first published by the Zinc Pigment Development Association has just been reprinted. A useful guide for those who buy or specify paints.



# GOOD, BAD OR INDIFFERENT ?

By A. FOREMAN

No. 12

## Drawings

**I** MAY make myself a little unpopular in some quarters this week, but I want to make some comments on the subject of drawings, as it is a matter which concerns all associated with building. On the job we often suffer badly from either the inadequacy or the excess of drawings and also from the various personal whims of draughtsmen. Good, clear and accurate drawings start off a job properly and keep it running smoothly. It really is not good enough to have freehand drawings or rough sketches not drawn to scale, on the back of an envelope or other scrap paper, and then expect instructions to be handed on to operatives with accuracy. It is also most important that drawings with sufficient details are available early enough to make preparations for what is shown on them.

I should like to see much greater consistency among the large number of people who supply the working drawings which come on building jobs so that when we see a drawing, whether from the architect, engineer, or sub-contractor, we would know what it means without having to puzzle over it for hours. For example, cannot we stick to a limited number of scales for main and detailed drawings and also to agreed symbols and colours or hatchings for materials; indication of materials is particularly important, as it is a nuisance to keep having to think what some colour means or having to refer to a chart, which is often on another drawing. Working drawings are not an occasion for "art" and as building becomes more and more complicated, clarity in drawing becomes even more essential.

Dimensioning of drawings is another matter of importance. We are always told to take the figured dimensions in preference to scaling off the drawing as this may not be true to scale, but if the dimensions do not add up correctly or the figures and arrow heads are not really clear so one can see where each dimension is to and from, they are not much help. A consistent method of indicating dimensions for the whole building industry and associated trades would be a heaven-sent blessing on the job.

Another point about drawings which I find important is the numbering and titles. On even a fairly small job the number of drawings can be considerable and one is constantly needing to refer quickly from one drawing to another as they lie on the table. Can we agree that titles and, above all, drawing numbers should be clearly indicated in the same place on all drawings, preferably the bottom right-hand corner. Drawings of odd sizes, especially very small ones, are a nuisance on the site or in the workshop, but sometimes they are unavoidable.

Last week I was shown a copy of B.S. 1192 for drawing office practice by one of my lads who attends a night school; this publication, if it was generally worked to, would go a long way towards what I want to see; so if the young builders and operatives are being instructed on this basis, I can only hope that the architects,

engineers and the vast number of others who prepare drawings are being suitably trained.

Of course, I only want this standardization to apply to those drawings which come on the job, into the workshop or the estimating office; the perspectives, sketches, and so on, intended for enlightening the building owner should be made in any way which would make him understand what is coming so as to avoid changes when the job is almost complete.

As we are talking of drawings, there might also be a little more consistency as to what are issued. Some jobs have insufficient drawings, others far too many and often they do not agree. What is wanted on the job is just enough drawings to give the full

information in as simple and clear a form as possible. They should not be cluttered up with repetitions and unnecessary notes; in particular notes and dimension figures must be legible. Another perhaps small but nevertheless important point is that some drawings, especially the general ones such as one-eighth scales, have to be used for a relatively long period, and it is very desirable that they are on paper or linen which will stand rough and continual handling for the duration of the job without becoming torn or illegible; similarly detail drawings and particularly full-size details, which are to go into workshops for work such as the preparation of joinery cutters, must be really handleable without excessive damage.

## CONCRETE MIXING & PLACING—2

By ROLT HAMMOND, A.C.G.I., A.M.I.C.E.

**O**N large building and civil engineering works the modern tendency is to install a batch mixing plant, in which a structure is erected to support large storage bins for aggregate above the mixer or mixers, the mixed concrete sometimes being carried considerable distances to the working site.

One of the most important comparatively recent developments in this field has been the mixing and proportioning of concrete automatically on an endless belt. Such a machine can be either portable or stationary, dry aggregate and cement being fed in layers on to a moving belt platform. It is mixed in a dry state on the latter, after which the material receives its water content in accordance with exact specification; mixing elements consist of horizontal and vertical spring-loaded tines which turn in the material as it is carried forward and mix it thoroughly. This method is claimed to produce concrete of high strength and consistent quality with minimum operating labour.

Although a continuous mixer can sometimes be employed on constructional work where large masses of concrete are involved, batch mixing is the general method adopted, the entire contents of the mixer being discharged before re-charging to ensure that each batch has its specified quantity of materials. Thus, with mixers of  $\frac{1}{2}$  cu. yd. capacity and over, mixing may be almost continuous, concrete being discharged in small lots and the contents of the mixer drum being maintained practically at full capacity by frequent charging; this is a practice to be strongly discouraged because it does not contribute towards a consistent and uniform quality.

In batch mixing, it is important to charge the hopper of the mixer with the coarse aggregate at the bottom, followed by the fine aggregate and by the cement, with the result that when this charge is emptied into the mixer in the reverse order, the heavy

materials will sweep the lighter materials from the hopper and help towards clearing it. If damp sand is used, then the mouth of the loading hopper can be prevented from becoming clogged by first placing half the coarse aggregate therein, followed by the cement and then by the fine aggregate which should be kept well to the fore. The rest of the coarse aggregate then follows.

The great advantage of a properly designed batch mixing plant is that the proportions of the various constituents are accurately weighed, and allowance can be provided for the moisture contents of the aggregate; batch mixing is the best known method of obtaining uniform concrete. Standard designs are available from one well-known manufacturer with storage capacities of 30 tons, which have four compartments, and 65 and 100 tons, which have six compartments. These designs are adaptable to a wide range of conditions, and plants with greater capacity can also be supplied.

Generally speaking, the output of a modern batching plant will vary from 40 to 100 cu. yd. an hour, storage bins being of steel plate construction and there should be no bolts or rivet heads to cause arching or air space. Bins can be fed by grab, conveyor or elevator; cement can be fed by a totally enclosed elevator from store house to bin. On large works, the plant can be designed for dual loading. With the latter arrangement a travelling two-way chute can be fitted above the batch storing hoppers so that the batches can be fed into them alternatively by one operator.

Perhaps the most important feature of a batch mixing plant is the weight control system, because upon the accuracy of this depends the uniformity of the batches. There should be separate weigh beams for aggregate, cement and water, with suitable means provided to allow for moisture content of the aggregates; this is achieved by adjusting percentage weights on the weigh

beams, samples of the aggregate having first been tested for moisture content.

The truck or transit mixer is a comparatively new development in concreting technique, and is an ideal system to use in conjunction with a central batch mixing plant. It comprises a concrete mixer mounted on a lorry, the dry constituents of the concrete being loaded into the mixer drum at the batch mixing plant; mixing proceeds as the lorry travels to the site, water being injected into the drum a few minutes before the destination is reached. The great advantage of this method is that much time is saved because mixing is done in transit; moreover, on a congested build-

ing site this system has the great merit that no space is needed for mixers, aggregate, sand or cement piles.

Success of transit mixing will depend upon efficient organization on site, because it is useless to have a stream of truck mixers taking ready-mixed concrete to a site which is not prepared for it. An excellent scheme on a large building site is to employ transit mixers in conjunction with concrete pumps, but those carrying out such work must be quite certain that they will have the necessary means available, such as fully prepared formwork and so forth, to be able to receive the continuous and rapid output which such a method can provide.

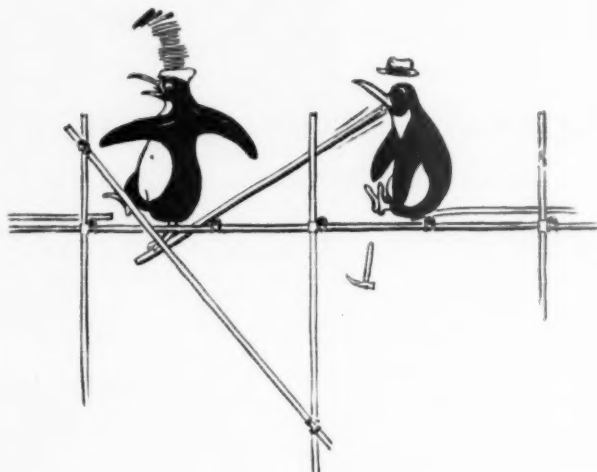
## ★ INTEREST ★

THE MINISTER OF SUPPLY has appointed Messrs. Thomson McIntock & Co., of 33 King William Street, London, E.C.4, and Messrs. Cooper Brothers & Co., of 14 George Street, Mansion House, London, E.C.4, to be the auditors of the accounts of the Iron and Steel Corporation of Great Britain for the Corporation's first financial year.

THE MINISTRY OF WORKS ANNOUNCE that, by arrangement with the manufacturers, the prices of all sheet glass are reduced by 5 per cent. as from November 13.

Following upon recent increases in costs, mainly of raw materials, the Minister of Works has authorised an increase of 4d. per sq. yard in the selling prices of Gypsum Plasterboard (i.e., Wallboard of all thicknesses, Baseboard and Lath) as from November 14, 1950.

## ACCIDENTS IN BUILDING



Since this cartoon was prepared a member of the *Architect and Building News* staff visiting a warehouse in course of erection by a well known building firm was nearly placed in the same plight as the down-going penguin. In place of timber planks, some spare aluminium thresholds had been employed. While they were long enough to lap the supports, owing to the lightness of the metal, some of the plank substitutes had been kicked so that the end had less than 1 inch bearing.

### DO YOU SEE THAT THE REGULATIONS ARE OBSERVED ?

Here is an extract from the relevant section of Building (Safety, Health and Welfare) Regulations No. 23:

(2) No board or plank which forms part of a working platform, gangway or run shall project beyond its end support to a distance exceeding four times the thickness of the board or plank unless it is effectively secured to prevent tipping, or to a distance which, having regard to the thickness and strength of the plank renders the projecting part of the plank an unsafe support for any weight liable to be upon it.

(4) Every board or plank which forms part of a working platform shall—

(a) rest securely and evenly on its supports, and

(b) rest on at least three supports unless, taking into account the distance between the supports and the thickness of the board or plank, the conditions are such as to prevent undue sagging.

(5) Where work has to be done at the end of a wall, the working platform at such wall shall, wherever practicable, extend at least 24 inches beyond the end of the wall.

THE BUILDING INDUSTRY cannot afford the extra 6d. an hour which the operatives are now seeking, nor can the country.

The President of the London Master Builders' Association, Mr. R. R. Costain, C.B.E., made this declaration at a luncheon of Central Area No. 3 last week (Nov. 14), the Area Chairman, Mr. T. M. Sapcote, F.I.O.B., presiding.

I believe most fervently in high wages, said Mr. Costain. But wages must be linked with output or the result is merely an increase in the cost of building. Official calculations show that the grant of that extra 6d., if unaccompanied by higher output, would be £1,000,000 a week.

Incentive schemes over the past couple of years have shown that output per man can be substantially increased without undue strain on the individual operative. That is the way to higher wages, and I hope the operatives, instead of opposing the extension of incentives, will take the lead in urging them on those employers who have not yet seen fit to adopt them or have been frightened off them by the apparent difficulties in introducing them.

We are continually being criticised as an industry for the high cost of building. If, by means of incentives, we could get back to the 1938 rate of production there would very quickly be a sharp drop in our costs.

A LIAISON COMMITTEE between the L.M.B.A. and the Association of Principals of Technical Institutes, the Regional Advisory Council, the three London Foremen's Associations and the Ministry of Education has been formed to stimulate interest in the training of foremen and to organise courses.

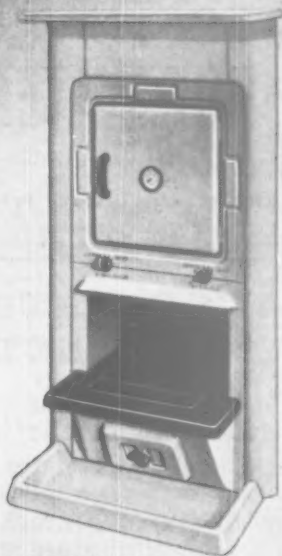
PRACTICAL DEMONSTRATIONS of Nelson stud welding for securing side walling, roofing, pipes, cables, etc., are being given by Messrs. Crompton Parkinson Ltd. at the Drill Hall, Fenton Street Barracks, Leeds, from November 27 to December 1; at 351 Sauchiehall Street, Glasgow, from December 5 to December 7; and at Carlisle House, Newcastle, from December 11 to December 13.

Nelson stud welding is designed to cut labour costs without unsightly methods of





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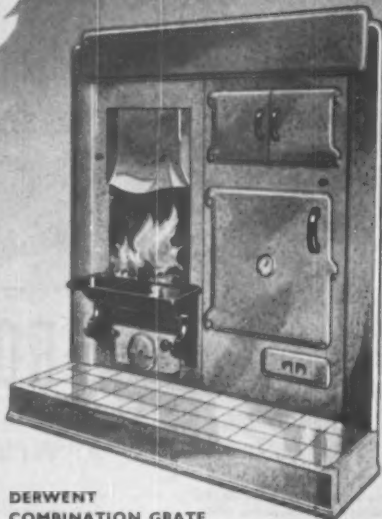


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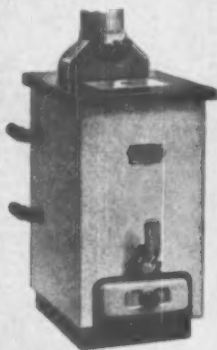
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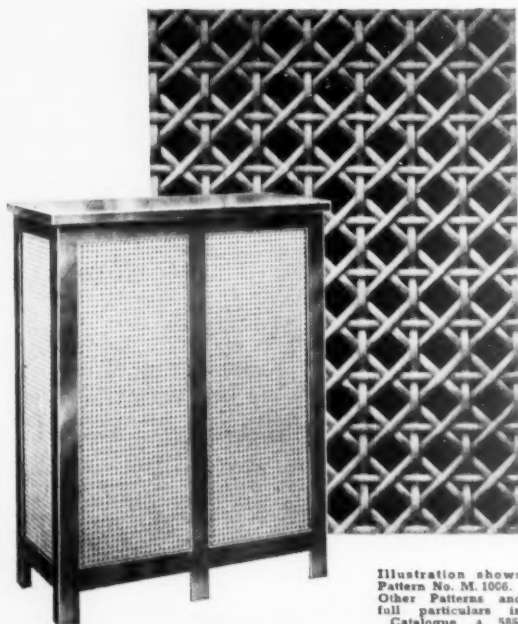


Illustration shows  
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Other Patterns and  
full particulars in  
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**Harvey**

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fixing. The system, which we understand is relatively new to this country, has been used in the Industry Pavilion designed by the Grenfell Baines Group for the Festival of Britain.

The demonstrations will include the fixing of corrugated aluminium, mild steel or asbestos roofing, etc.

Full details from Crompton Parkinson Ltd., Crompton House, Aldwych, London, W.C.2. Tel.: Chancery 3333, Ext. 36.

A NEW PAINT, Solana-Sol, has been produced by Solignum Ltd., 30 Norfolk Street, London, for application direct to asbestos pipes, lagging and similar surfaces. The makers claim that it is not affected by alkali in the asbestos, requires no primer, is easy to apply, dries with a semi-gloss finish and is low in cost.

SEVENTY-EIGHT TROPICAL TYPE HOUSES, first of an order for 162 factory-built houses placed by the Australian Government with A. W. Hawksley Ltd., have left U.K. by sea.

AMENDMENTS OF THE TOWN AND COUNTRY PLANNING ACT, advocated to the Minister of Town and Country Planning and the Secretary of State for Scotland have now been published. The Federation of British Industries does not challenge the principle of some public control of land use. The purpose of the recommendation is mainly to reduce delays, frustrations and injustices which have been so multiplied as to produce a widespread feeling of despair.

The Federation recommends a thorough review of the multi-stage procedures which at present require five independent authorities to be satisfied with a project—one after the other and from their respective points of view. The recommendations include reduction of the time allowed for decisions at each stage and optional arrangements, in large projects, for simultaneous meeting of and decision by all departments on a projective development.

An explanation is again asked of Government Policy for industrial expansion and location of industry. "No one knows what the official policy is, nor do they understand on what principles urban industrial development is to be permitted."

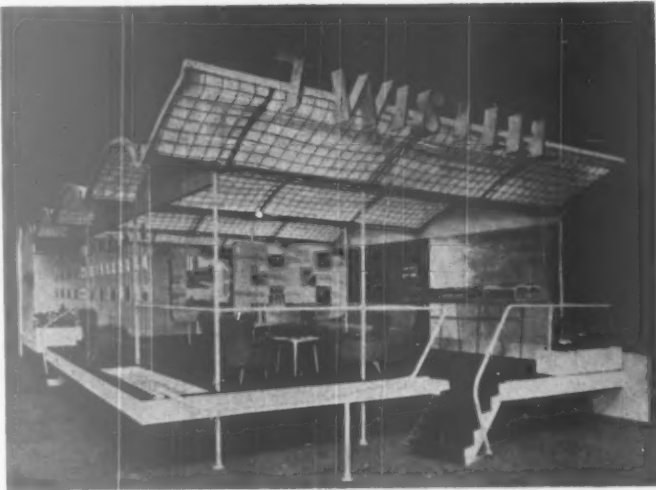
The system of granting permission to develop for limited periods with the liability of enforced demolition at the end of two or three years is sterilising.

The financial inequities of the present Act in respect of development charges are the subject of proposed changes. The Federation believes that adoption of these changes would restore the incentive to develop which the Acts have seriously diminished. The Federation considers it essential that there should be a right of appeal against District Valuers' assessments to an independent body such as the Lands Tribunal.

Repeal of section 52, which deals with compensation for compulsory acquisition is advocated.

THE BRIGHTON COUNTY SECONDARY SCHOOL FOR BUILDING AND ENGINEERING is not to be closed, down, as was recently reported in the Brighton Press.

Councillor F. G. Field, chairman of the school governors, said he would like to cor-



The Twisteel stand at the recent Public Works and Municipal Services Exhibition. The Architect is Noel Moffett.

rect an item in the Press that the school was to be shut down. He declared: It was not the fault of the Press; perhaps it was a bit of unfortunate drafting.

"It is true the Education Committee have a development plan and the school is

to be changed slightly in its application, but not in its basic function."

Councillor Field confessed he was not satisfied with the section. "I want to see a lot more plasterers, bricklayers and carpenters turned out with a good working knowledge and go on to assist in our colossal building programme," he said.

He appealed to builders to assist the school in finding a plastering instructor.

Both Councillor Field and the Mayor (Alderman S. Davey) referred to "white collar" and "black-coated" workers.

"The white collar job is very nice and comfortable," said Councillor Field, "but those people enter figures in a book and do not see the results of their work."

The Mayor said: "To-day we are trying to make far too many black-coated workers and the black-coated worker produces exactly nothing. The more producers we get, the more successful this country is going to be."

The headmaster, Mr. E. Downing, said: "What we aim at is the development of educated citizens not the production of skilled automatons."

## M.O.W. LECTURES

### November 28

Aluminium Alloys in Building.  
7.0 p.m. at Red Lion Hotel, COLCHESTER.

Good Practice in Plumbing.  
7.0 p.m. at Frederic Natrass School, NORTON, STOCKTON-ON-TEES.

Maintenance of Builders' Mechanical Plant.  
7.0 p.m. at College of Technology and Arts, Eastlands, RUGBY.

### November 29

Good Practice in Plumbing.  
7.15 p.m. at Education Buildings, BURTON-ON-TRENT.

Electrical Installations in Buildings.  
7.15 p.m. at Technical College, STOKE-ON-TRENT.

Some Mechanical Aids Developed for Building.  
7.15 p.m. at Technical College, GRAVESEND.

### November 30

7.15 at Brocklehurst Memorial Hall, MACCLESFIELD.

### December 4

Good Practice in Domestic Drainage.  
7.0 p.m. at Town Hall, MAIDENHEAD.

Introduction to Site Costing for Builders.  
7.15 p.m. at Co-operative Provident Society Ltd., Albion Street, DERBY.

Site Investigation.  
7.15 p.m. at Gas Showrooms, Albert Square, MANCHESTER.

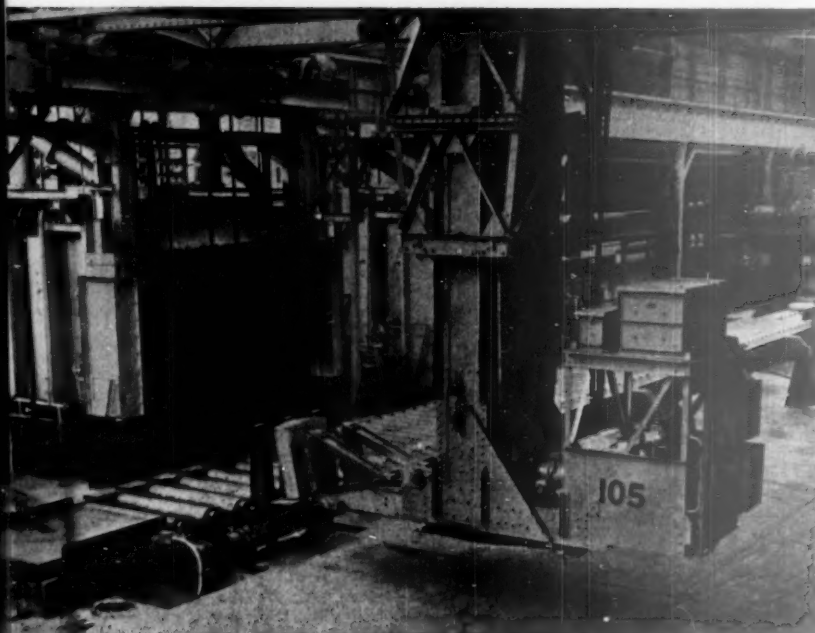
"SURVEYING FROM PHOTOGRAPHS" will be the subject of six weekly lectures to be given by E. A. Miskin, M.A., A.R.I.C.S., at the L.C.C. Brixton School of Building, beginning on Tuesday, January 23, 1951, at 6.30 p.m.

The main subjects of the lectures will be: Principles of photographic perspective; factors contributing to the distortion of image points. Principles of rectification: simple methods of controlling series of photographs. Plotting of detail from air photographs, together with tonographical interpretation. Elements of three-dimensional measurement. Outline of automatic machine plotting.

The fee for the course is £1, and application for admission, stating name, address, and position in firm, should be made to the Secretary, Brixton School of Building, Ferndale Road, S.W.4.

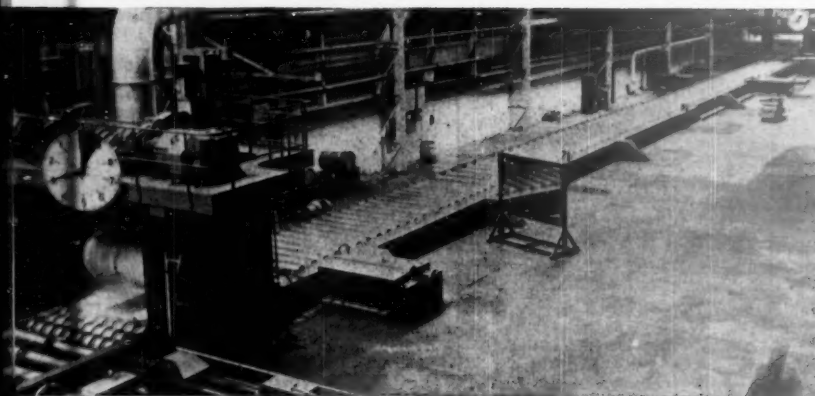
## FACTORY PROCESSES

### No. 3



ILLUSTRATED here are three stages in the manufacture of sheet aluminium from ingot. The process is carried out at a continuous strip mill recently installed by the Northern Aluminium Company at Rogerstone, Newport, South Wales.

The top picture shows the ingot (which has been "scalped" to the required smoothness and preheated) being lifted by mechanical grab on to the line of continuous rollers. Along these rollers the ingot passes to the breaking down hot-mill shown in the centre picture. The operation of the rollers and the mill is controlled from a centrally placed cabin. The ingot is passed backwards and forwards through twin forged steel rollers 96 ins. long and 35 ins. in diameter. In this mill the ingot is reduced from about 9 ins. to 2½ ins. thick. From here the flattened ingot passes to a second, similar but smaller, mill and thence through the up-cut shears shown in the lower picture. This shear has a capacity of 1 in. thick aluminium plate up to 80 ins. wide. The blades are set to produce a vee cut which facilitates the entry of the slab into the hot finishing machine, where the slab is reduced to between .10 ins. and .25 ins. Offcuts from the sheared strip are remelted.



After leaving the finishing mill the strip is cooled by water spray to a temperature low enough for coiling. Aluminium alloy strip up to .2 ins. thick can be coiled at a maximum rate of 800 ft. per minute. The coils are then cold rolled. The cold rolling operation may be carried out in any mill. Transporting of coils offers no great difficulty and they could at this stage be moved to any part of the country without risk of damage.

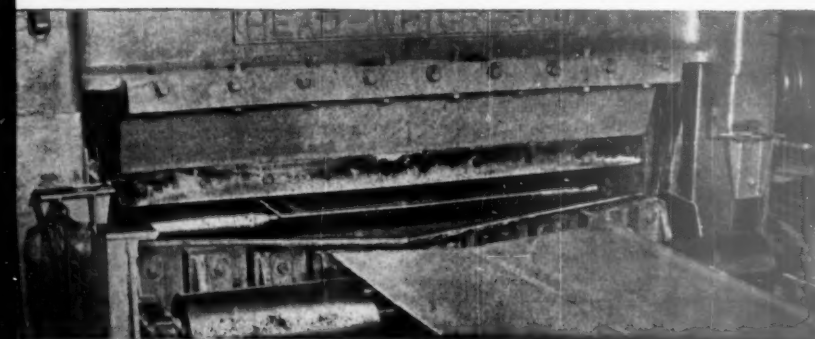
Coils which are to be cold rolled in the new mill at Rogerstone, are deposited six at a time on to a slat conveyor which passes them to the Tandem Cold Mill.

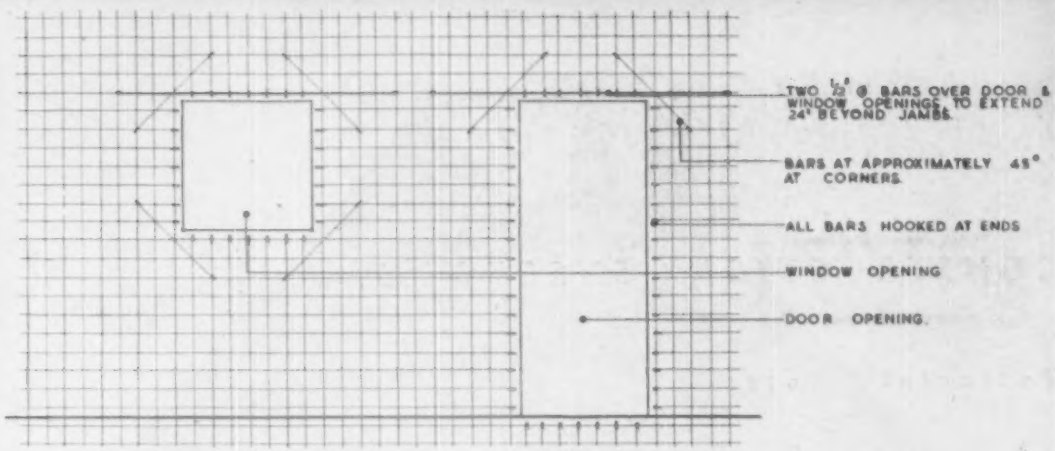
After rolling, subsequent movement of the material depends on the nature of the finished product.

Material required for building sheet including corrugated sheeting, is delivered from the Tandem Mill, where it is rolled down to final gauge, to the Heavy Shearing and Corrugating Line. Here the coil is straightened out by unwinding it from cones and passing it through a roller leveller; it is then cut up in a reciprocating-type flying shear into sheets of the required size, which are then delivered on to a belt conveyor.

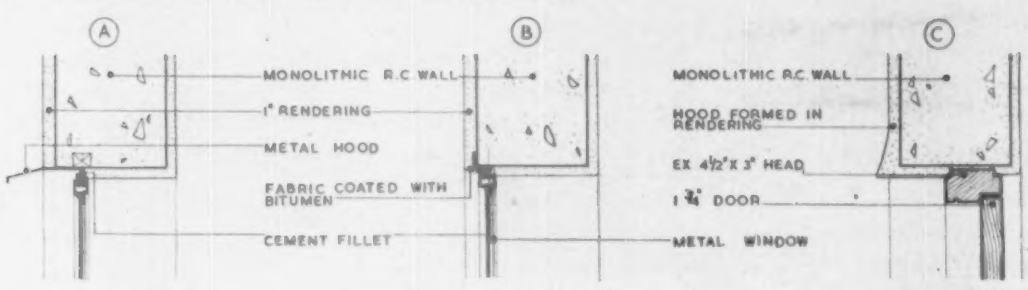
Sheets which are to be corrugated on the roller machine, in which the material is passed between pairs of cast iron rolls adjusted to give the required groove depth, are delivered by conveyor and stacked after corrugating. Sheets which are to be finished either flat or corrugated in some other type of machine are stacked as they are delivered from the flying shear, one section of the conveyor tables being rolled out of the way.

Sheets of all types from the Heavy Shear Line are then inspected, and, after counting, the correct numbers are packed ready for despatch.

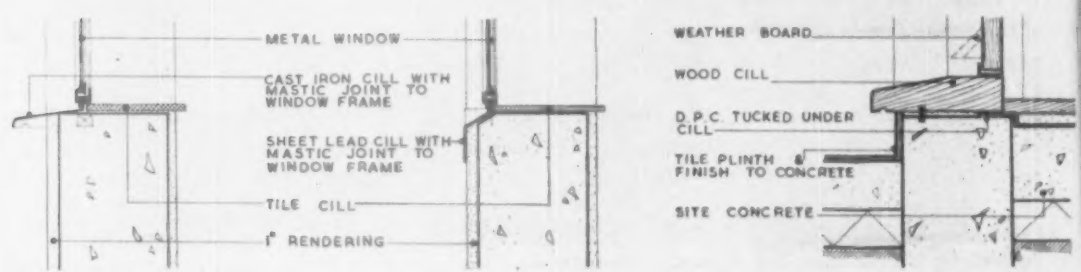




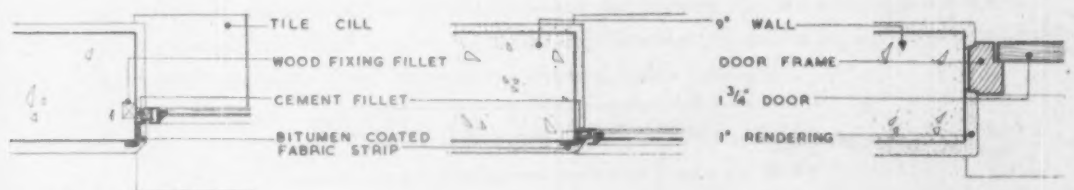
1. ARRANGEMENT OF REINFORCEMENT ROUND OPENINGS.



1. HEADS OF OPENINGS



2. CILLS OF OPENINGS



3. PLANS OF OPENINGS



## CONSTRUCTION SHEET L.6, C.20.

### Editorial Notes

This sheet deals with openings in monolithic reinforced concrete walls.

Detail 1 shows the arrangement of reinforcement round normal door and window openings in concrete walls. The reinforcement may consist, under ordinary circumstances, of  $\frac{3}{8}$  in. or  $\frac{1}{2}$  in. diameter mild steel bars at about 6 in. centres both horizontally and vertically. Two  $\frac{1}{2}$  in. diameter bars should be placed over each door and window opening, to extend on each side at least 24 in. beyond the jambs. Bars at approximately 45 deg. should be placed within the concrete near each corner of the opening. Wide openings need special detailing. All bars should be hooked at their ends.

Details at (A) show a metal window in a monolithic reinforced concrete wall, where a metal hood and cill are used. A metal hood is fitted at the head. This sheds the rain running down the face of the building. A cast iron cill is shown at A2. Although the metal projecting hood and cill protect the top and bottom of the window, they do not protect the jambs as they are normally only either the same width as the opening or very little wider. The gap between the metal frame of the window and the concrete needs some protection. This gap is usually filled with cement mortar, which is not a suitable material when used alone, as it shrinks on drying, leaving a gap through which water can pass. A strip of fabric applied with hot bitumen over the joint between wall and frame is a method which will ensure a watertight joint. The rendering is carried over the fabric.

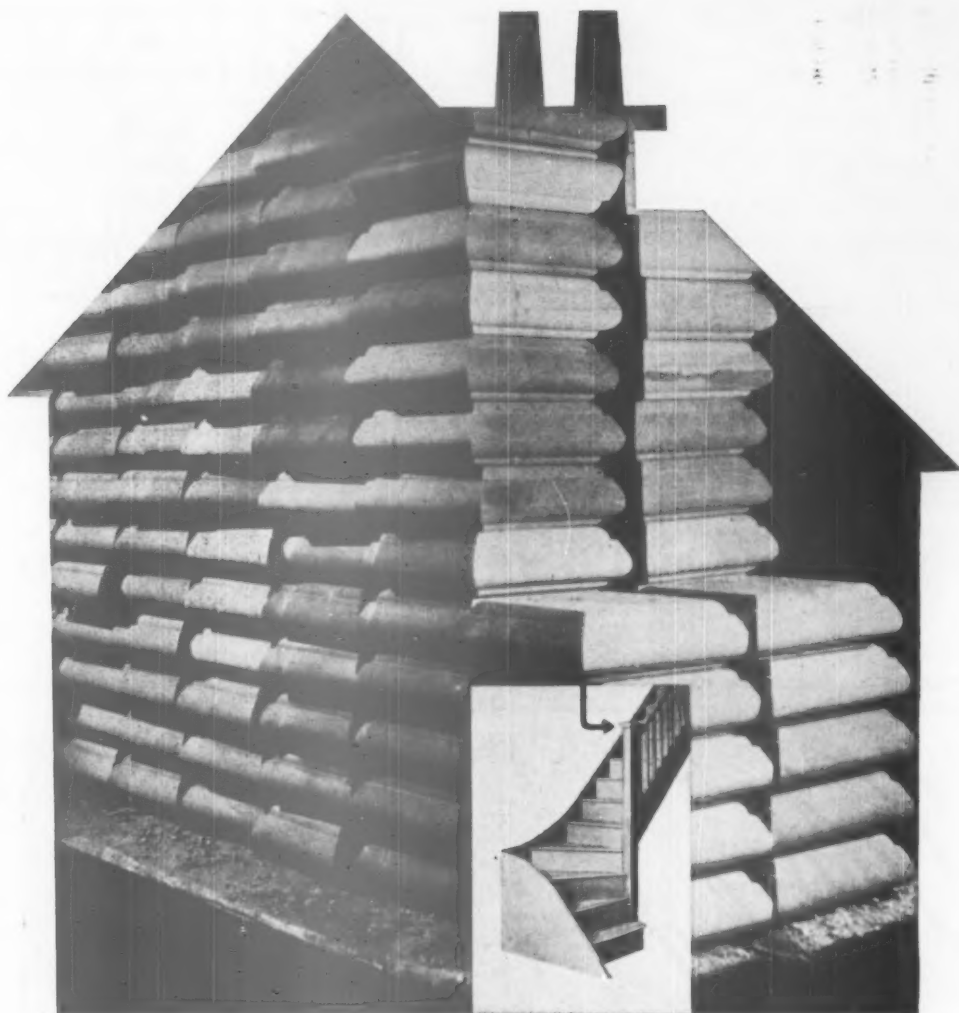
Details at (B) show a window with a flush head and cill. Fabric coated with bitumen is applied, as shown at A.3, at the head and jamb of the window, as no projecting members are used to throw water clear of the frame. A sheet lead cill is used.

Details at (C) show a wood door in a monolithic reinforced concrete wall. At the head, a throated hood is formed in the rendering to throw water clear of the door. A weather board (shown dotted on sections) should be included where the door is in an exposed position. A metal channel is provided at the foot of the door. Any water running down the door collects in the channel and can escape through the weep holes which are provided. No plaster grounds are used, the door frame being rebated to take both plaster and rendering.

---

We welcome comments from readers. These will be summarised and published. Letters should reach us as early as possible to avoid time lag.





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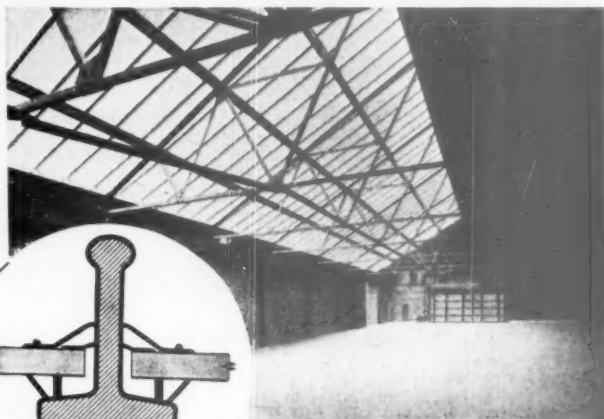
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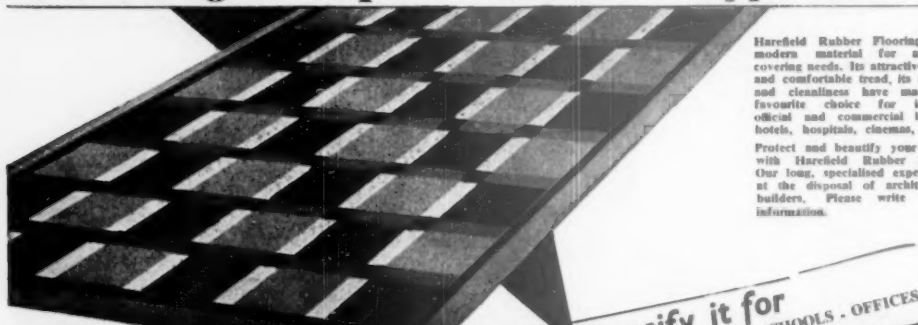
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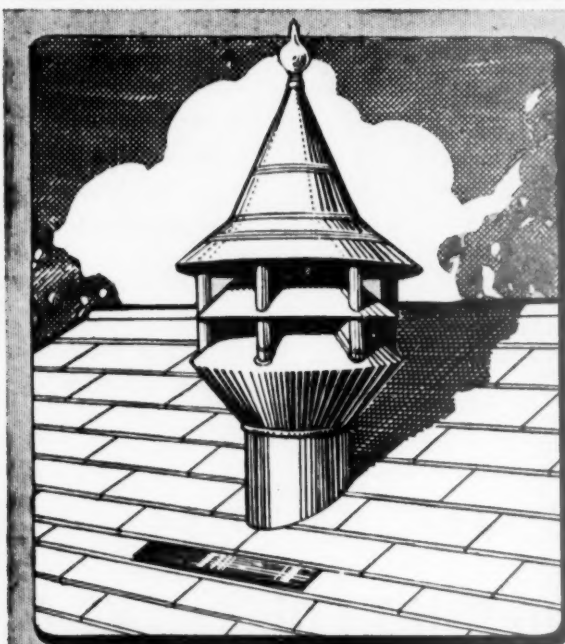


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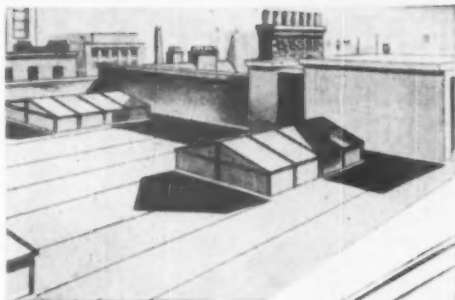


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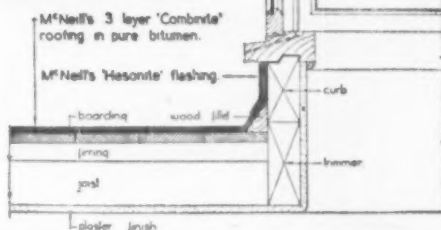


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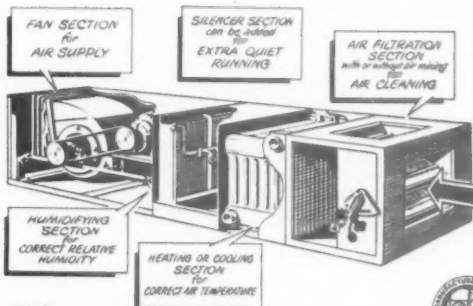
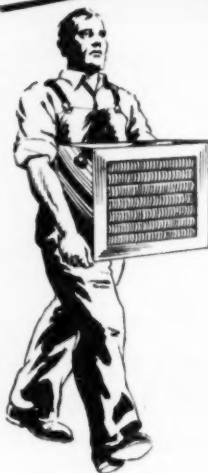
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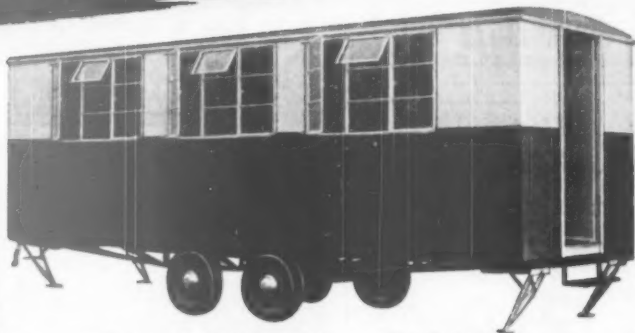
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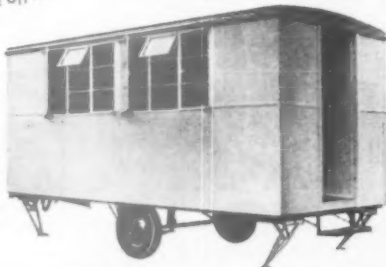
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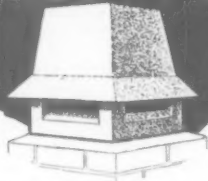
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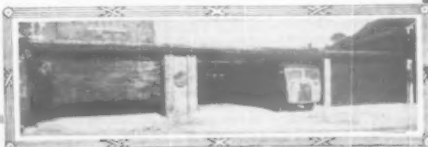


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Applicants, giving names, addresses and qualifications of two referees (where possible one should be present employer) and stating for which appointment application is made, should reach the County Planning Officer, County Offices, Preston, by 9th December, 1950. 15028

## THE COUNTY COUNCIL OF CLACKMANNAN.

## COUNTY ARCHITECT'S DEPARTMENT.

**APPLICATIONS** are invited for the appointment of a **JUNIOR ARCHITECTURAL DRAUGHTSMAN**. The salary will be Grade I of the A.P.T. Division of the J.I.C. Scale, viz., £390 per annum rising to £435 per annum. Candidates should have good general office experience and be neat and expeditious draughtsmen.

The post is supernumerary, and the candidate selected will require to pass a medical examination prior to appointment.

Applications, stating age, qualifications and experience, with copies of three recent testimonials, should be submitted to the undersigned within ten days of publication of this advertisement.

N. A. SCORRIE, County Clerk.  
County Buildings, Alva.  
16th November, 1950. 15030

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**VACANCIES** exist for **ARCHITECTS** in the Public Works Department, Gold Coast. Candidates should have the A.R.I.B.A. or equivalent qualification, and have had not less than five years' experience since obtaining qualification. They should have considerable experience in design, preparation of drawings, specifications and contract documents, preferably with a Government or Local Authority. Salary £1,210 per annum in scale rising to £1,600 per annum gross, point of entry depending on age, qualification and experience.

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with whom completed applications, in duplicate, should be lodged not later than 10th December, 1950. Consideration will, however, be given to late applications received before the 10th January, 1951. 15029

## MUNICIPALITY OF SINGAPORE.

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ANDREW SCOTLAND, Director of Education  
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## APPOINTMENT OF ARCHITECTURAL ASSISTANT.

**APPLICATIONS** are invited for the appointment of an **ARCHITECTURAL ASSISTANT** in the Office of the Borough Surveyor at a salary on the National Joint Council Scale A.P.T. III and IV, i.e., £450-£525, commencing salary according to qualifications and experience.

Candidates should have passed the Intermediate Examination of the R.I.B.A., and have had such subsequent experience as will justify their placing in the appropriate grade, be experienced in the design and erection of houses and other municipal buildings.

Applications, endorsed "Architectural Assistant," should be delivered to the undersigned not later than Monday, 11th December, 1950, and be accompanied by not more than three recent testimonials and full particulars of training and experience.

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E. J. O. GARDINER, Town Clerk,  
Town Clerk's Office,  
Municipal Offices, "Beech Hurst,"  
Weyhill Road, Andover, Hants.  
11th November, 1950. 15019

## HIS MAJESTY'S COLONIAL SERVICE.

**A VACANCY** exists for an **ASSISTANT ARCHITECT** in the Public Works Department, Gambia.

The appointment is either on contract or permanent and pensionable. If on contract the salary would be in the scale £384 to £1,000 per annum. If permanent and pensionable, the salary scale would be £720 to £1,300 per annum. Point of entry in each case depending on age, qualifications, experience and war service. In addition to the above, a non-pensionable cost-of-living allowance of £60 per annum is payable. For contract appointments a gratuity of £25 for every three months of service is payable at the termination of the service.

Candidates must have had a thorough training and experience as a general assistant in an Architect's Office. Age limits 35 to 40. Candidates for appointment to the permanent staff must have the A.R.I.B.A., or equivalent qualification.

Partly furnished quarters at rent of £60 to £90 per annum for officers appointed on the permanent establishment, but rent-free for those on contract terms. Free first-class passages each way each tour for the officer and his wife, if married, are provided. Home leave on full pay at the end of each tour of 18 months at the rate of seven days for each month of residential service. Income Tax at local rates.

Intending candidates should write for further particulars and application form to the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.1, giving brief details of age, qualifications and experience as soon as possible, quoting the reference number 27301/15. 15022

## NATIONAL COAL BOARD—EAST MIDLANDS DIVISION.

## ARCHITECT'S DEPARTMENT.

**APPLICATIONS** are invited for the following permanent and supernumerary appointments—  
(a) **ARCHITECT**, Grade I—Salary £700 x £25 - £875 per annum  
(b) **ARCHITECTS**, Grade II—Salary £450 x £25 - £700 per annum.

The point of entry into the relevant salary scales will depend on the qualifications and experience of the successful applicants, and subject to satisfactory service, opportunities will be available for promotion to higher grades.

The architectural work of the Department covers all new projects in the Division, which embraces five counties. The work is of considerable variety and interest and includes the design of industrial buildings of all types concerned in the planning of collieries, such as workshops, power plants, offices, stores, pithead baths, canteens, medical centres, recreation buildings, convalescent homes, etc.

Part-time studying facilities are given to Assistants in the Department to avail themselves of the advantages of the Nottingham School of Architecture.

Applications, stating age, education, qualifications, experience, present appointment and salary, should be submitted within 14 days of publication of this advertisement to The Secretary, National Coal Board, East Midlands Division, Sherwood Lodge, Arnold, Nr. Nottingham.

Envelopes should be marked "S.V.46," and original testimonials should not be sent. 15023

# BRITISH ELECTRICITY AUTHORITY. SOUTH WALES DIVISION

APPLICATIONS are invited for the appointment of a CLERK OF WORKS for the erection of the new Divisional Headquarters buildings in Cardiff under the supervision of the Architects, Sir Percy Thomas & Son. The appointment is temporary for a period of approximately 18 months, and the salary will be at the rate of £15 per week.

Candidates should have had sound experience in similar positions on fairly large scale Civil Engineering and Building Construction Works.

Forms of application may be obtained from the Divisional Secretary at the address below, to whom completed application forms should be returned not later than the 8th December, 1950, in an envelope endorsed "Clerk of Works—Divisional Headquarters."

H. V. PUGH, Divisional Controller,  
Cardiff (Pentagon) Airport, Cardiff.  
15th November, 1950. 15023

# SURREY COUNTY COUNCIL EDUCATION COMMITTEE.

KINGSTON-UPON-THAMES SCHOOL OF ART.  
KNIGHTS PARK, KINGSTON-UPON-THAMES.

## ARCHITECTURAL DEPARTMENT.

APPLICATIONS are invited for post of SENIOR ASSISTANT in the Department of Architecture, which is an R.I.B.A. Listed School. Burnham Salary Scale—(Men) £700 to £25 - £800 per annum, with additions for graduates and training experience. Applicants should be academically qualified, have varied practical experience and some knowledge of architectural school teaching. In addition to instruction in the day school, the applicant appointed will be required to take responsibility for the organisation and administration of the Evening School of Architecture.

Application forms, together with further particulars, obtainable from Registrar, to whom they should be returned not later than 14 days after the appearance of this advertisement. 15033

# CITY OF LEEDS.

## WORKS DEPARTMENT APPOINTMENT OF DIVISIONAL OFFICER.

APPLICATIONS are invited for the above appointment on the staff of the Director of Works, at a salary within the scale of £520-£660 per annum, according to experience. In addition a car allowance will be granted.

Candidates must possess a sound knowledge of building construction, have extensive experience in the maintenance, adaptation, and alteration of local authority buildings, including the preparation of specifications, quantities and estimates, and be able to supervise building work and control staff.

Preference will be given to applicants holding a recognised architectural or surveying qualification. The appointment is subject to the provisions of the Local Government Superannuation Act, 1947, and the successful applicant will be required to pass a medical examination.

Suitably endorsed applications, stating age, education, training, experience and qualifications, together with the names of three persons to whom reference can be made, should be forwarded to the undersigned not later than Saturday, 2nd December, 1950.

Canvassing in any form, either directly or indirectly, will be a disqualification.

H. R. HUDSON, L.R.I.B.A., M.R.San.I.,  
Director of Works.

Works Department,  
Sweet Street, Leeds, 11. 15031

# LONDON COUNTY COUNCIL.

APPLICATIONS are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencement salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (footings and multi-storey flats) and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (816). 15010

# CITY OF BIRMINGHAM PUBLIC WORKS DEPARTMENT.

APPLICATIONS are invited for the following appointments to the permanent staff in the Architectural Section of the Public Works Department—

- (a) ARCHITECTURAL ASSISTANTS. Grade A.P.T. VIII (£685/760).
- (b) QUANTITY SURVEYORS. Grade A.P.T. VIII (£685/760).
- (c) ARCHITECTURAL ASSISTANTS. Grade A.P.T. V (£520/570).
- (d) ARCHITECTURAL ASSISTANTS. Grade A.P.T. IV (£480/525).
- (e) ASSISTANT QUANTITY SURVEYORS. Grade A.P.T. IV (£480/525).
- (f) ARCHITECTURAL ASSISTANTS. Grade A.P.T. II (£420/465).

For architectural posts (a) the Associateship R.I.B.A. or equivalent qualification must be held, for posts (c) and (d) the Intermediate Examination of the R.I.B.A. or equivalent qualification, and for post (f) the National Certificate (building) or equivalent qualification.

For Quantity Surveyor post (b) applicants must be Associate Members of the R.I.C.S. (Quantity Surveyors) and have had considerable experience in a Quantity Surveyor's Office and be competent to take off and prepare Bills of Materials for all classes of building. For post (c) applicants must have obtained the Intermediate Examination of the R.I.C.S. or equivalent qualification.

Applicants need not have had previous local government experience.

The successful applicants will be required to obtain their own housing accommodation. The scales are in accordance with those laid down under the National Scheme of Salaries and the commencing salary will be fixed at an incremental point within the grades according to the qualifications and experience of the candidates appointed.

The appointments may be terminable by one month's notice on either side.

The successful applicants will be required to undergo a medical examination by the Corporation Doctor and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1947.

Applications, endorsed with the heading of the post applied for, stating age, qualifications and experience, together with the names and addresses of two persons to whom reference can be made, should reach the undersigned not later than the 11th December, 1950.

Canvassing, either directly or indirectly, will disqualify.

HERBERT J. MANZONI,

City Engineer and Surveyor,  
The Civic Centre, Birmingham, 1. 15025

# CITY OF LEEDS EDUCATION COMMITTEE.

## COLLEGE OF ART.

Principal, E. E. PULLER, A.R.C.A., F.S.A.E.

## THE LEEDS SCHOOL OF ARCHITECTURE.

Head of School,

W. A. EDEN, M.A., F.S.A., F.R.I.B.A.

APPLICATIONS are invited for a post as LECTURER AND TUTOR in the Leeds School of Architecture. Applicants should hold a recognised Degree or Diploma in Architecture and should have some practical experience. Special qualifications in Reinforced Concrete Design and Construction would be an advantage.

Salary will be in accordance with the Burnham Scale for Assistants in Colleges of Art with allowances for training and Degree, together with increments for past service and practical or teaching experience.

Further particulars and forms of application, to be returned within a fortnight of the appearance of this advertisement, may be obtained by sending a stamped addressed foolscap envelope to the undersigned.

GEORGE TAYLOR, Chief Education Officer,  
Education Department, Leeds, 1. 15024

AIR MINISTRY have vacancies for DESIGNER/ DRAUGHTSMEN in the Design Branch of the Works Department in the following fields: Architecture, Drainage and Water Supply, Land Survey. Vacancies are mainly in London but there are some in the provinces. If desired, consideration would be given to making appointments for London only. Salaries are on ranges up to £625 with starting pay in accordance with age and qualifications. Applications, stating age, qualifications, previous appointments with dates, should be sent to Air Ministry (S.2.H.), Cornwall House, London, S.E.1, from which address further details may also be obtained. 15004

# KENT COUNTY COUNCIL.

APPLICATIONS are invited for appointment in the Buildings Department of a BUILDING SURVEYOR, at a salary within A.P.T. Grades IV-VIa (£460-£610).

Applicants should have had practical experience in the building trade and be thoroughly competent to supervise work and prepare specifications and detailed estimates in connection with the maintenance of buildings, and to prepare drawings for new projects of a minor nature. They should preferably be Licentiates of the Institute of Builders by examination or have passed the examination for Building Surveyors of the Royal Institute of British Architects, or hold an equivalent qualification.

The commencing grade and salary will be dependent upon qualifications and experience. The post is supernumerary and the successful candidate will be required to pass a medical examination.

The Council is unable to assist in the provision of housing accommodation for the successful candidate.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be submitted to him not later than fourteen days after the appearance of this advertisement.

W. L. PLATT, Clerk of the County Council,  
County Hall, Maidstone.  
6th November, 1950. 14996

# RHONDDA URBAN DISTRICT COUNCIL.

APPLICATIONS are invited from suitably qualified persons for the appointment of ASSISTANT ARCHITECT in the Department of the Council's Housing Architect, at a salary in accordance with Grade A.P.T. VI (£595 to £70/25 - £660).

Applicants for the post should have sound general architectural experience and must be good draughtsmen. Previous Local Government experience is not essential but preference will be given to Associates of the Royal Institute of British Architects.

The appointment will be terminable by one month's notice on either side and will be subject to the National Scheme of Conditions of Service. The successful candidate will be required to pass a medical examination and to be a contributor within the meaning of the Local Government Superannuation Act, 1947.

Applications on forms to be obtained from the Housing Architect, Mr. C. GINGELL, A.R.I.B.A., A.R.C.S., 13 Ystrad Road, Pentre, Rhondda, accompanied by copies of two recent testimonials, to be returned to the undersigned in envelopes endorsed "Assistant Architect" not later than Monday, the 4th of December, 1950.

D. J. JONES, Clerk of the Council,  
The Council Offices,  
Pentre, Rhondda. 14997

# LONDON COUNTY COUNCIL.

## ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new housing schemes and other public buildings. The positions are supernumerary. Candidates for Grade III positions should possess professional qualifications.—Application forms from the Architect (AR/P.5), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (134). 15097

# MINISTRY OF WORKS.

THERE are vacancies in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS and LEADING ARCHITECTURAL ASSISTANTS with recognised training and fair experience. Successful candidates will be employed in London and elsewhere on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges, and Housing.

Salary: Architectural Assistants £300-£525 per annum. Leading Architectural Assistants £500-£625 per annum. Starting pay will be assessed according to age, qualifications and experience. These rates are for London; a small deduction is made in the Provinces.

Although there are not established posts, some of them have long term possibilities and competitions are held periodically to fill established vacancies.

Apply in writing, stating age, nationality, full details of experience, and locality preferred, to Chief Architect, W.G.10/BC, Ministry of Works, Abell House, London, S.W.1, quoting reference W.G.10/BC. 14671



**THE ROYAL INSTITUTE OF BRITISH ARCHITECTS** invite applications for the appointment of an **ASSISTANT SECRETARY** with particular responsibility for matters concerning relations with the press, public, professional societies, other organisations, and with foreign visitors. Applicants with or without architectural qualifications will be considered. Salary £750-£1,000 according to qualifications. Forms of application and full details available on request to the Secretary, Royal Institute of British Architects, 66 Portland Place, London, W.1. [5026]

#### ARCHITECTURAL APPOINTMENTS VACANT

**NAIROBI** firm of Architects require two Senior Assistants with pre-war experience. Must be good draughtsmen and thoroughly capable though not necessarily qualified. Salary £300-£1,000. Suggested four-year contract, with outward bound individual passage. — Box 7145, The Architect and Building News. [5021]

#### SITUATIONS VACANT

**ARCHITECTURAL** Metal Workers require a Designer-Draughtsman of considerable merit. Top salaried position for skilled man. — Apply The Morris Singer Company, Hope House, St. Peter Street, Westminster, S.W.1. [10095]

#### INSURANCE

**ARCHITECTS'** Indemnity Insurance effected. — Please write for Proposal Form to **E. J. SAXBY**, Incorporated Insurance Broker, 17a Carfax, Hove, Sussex. Tel. 990 [4980]

#### FOR SALE

**STOCKS** for Sale. About 3,000 cu. ft. 1 1/2 in. S.E. Merchantable mixed Oak and Ash (many Oaks) cut over 3 years, at 8s. 6d. per cu. ft. F.O.R.M. Birmingham to clear. Also Oak Posts in sizes such as 3 in. x 1 in., 4 in. x 4 in., 4 in. x 6 in., 4 in. x 5 in., etc.—**Timberco Limited**, Chocia Street, Birmingham. 1 [4994]

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#### MISCELLANEOUS

**SLASH** deadweight—increased insulation. "Dohm Vermiculite" for concrete, plastering and loose fill in schools, flats, factories, power stations and kilns.—**Dohm Ltd.**, 167 Victoria Street, London, S.W.1. [10104]

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#### CONTRACTS

##### COUNTY OF LINCOLN. —PARTS OF LINDSEY

**POLICE BUILDINGS AND COURTS.**  
TOWN HALL SQUARE, SCUNTHORPE.

CONTRACT No. 2—SUPERSTRUCTURE.

**CONTRACTORS** desirous of tendering for the Superstructure of these buildings, known as Contract No. 2, should submit their names to the Architects, Messrs. C. B. Pearson & Son, F.R.I.B.A., 18 Dalton Square, Lancaster, on or before the 30th November, 1950. The Foundations up to Ground Level, Roads, Sewers and Site Works have been subject to a separate contract and are now nearing completion.

Specifications, Bills of Quantities and Form of Tender will be sent to Contractors desirous of tendering, and plans may be seen at the Offices of the Architects, the Office of the Clerk of Works on the site, or at my Office.

The acceptance of any tender is subject to the approval of the Home Office and the Council do not bind themselves to accept the lowest or any tender.

Sealed tenders endorsed "Scunthorpe Police Buildings and Courts" must be delivered to me not later than Saturday the 6th January, 1951.

**HERBERT COPLAND,**

Clerk of the County Council.  
County Offices, Lincoln.  
November, 1950. [5010]



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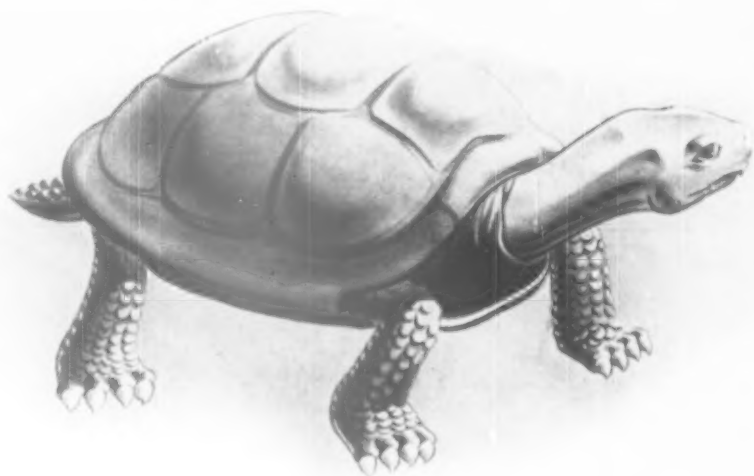
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S. H. Loweth, F.S.A., F.R.I.B.A., M.I.STRUCT.E., County Architect.*

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